



**Soil Gas Investigation in the  
MW19/Hot Spot 1 Area  
L.E. Carpenter & Company  
Borough of Wharton**

**Morris County, New Jersey**

*USEPA ID No. NJD002168748*

**May 2006**

280040



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# Section 1

## Introduction

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RMT, Inc. (RMT), on behalf of our client, has prepared this Investigative Report for the L.E. Carpenter and Company (LEC) ("site") located at 170 North Main Street, Borough of Wharton, Morris County, New Jersey (Figure 1), documenting the March 1, 2006 soil gas sampling activities conducted in the MW-19/Hot Spot 1 area located at the northwest corner of the site.

### 1.1 Background

The MW-19/Hot Spot 1 area is located immediately west of Building 9, and is associated with two former 10,000-gallon underground storage tanks (USTs), which contained methyl ethyl ketone (MEK), waste MEK and waste pigments (UST E-3 and UST E-4). In accordance with the 1986 Administrative Consent Order (ACO), GeoEngineering, Inc. and Roy F. Weston (Weston) conducted a site wide Remedial Investigation (RI) and separated the LEC site into three areas. The MW19/HS1 area was contained in the area classified as Area III. Four test pits (TP-63 to TP-66) were excavated around the two USTs. Soil samples were collected from immediately above the water table [between 7 feet and 9 feet below ground surface (bgs)] and analyzed for volatile organic compounds (VOCs), base neutral organics (BNO), and priority pollutant metals. No VOCs were detected above quantification limits and residual concentrations of cadmium were detected in TP-63. However, test pit sample results did identify elevated concentrations of bis (2-ethylhexyl) phthalate (DEHP). Subsequently, DEHP was identified as a primary MW19/HS1 area contaminant of concern (COC).

USTs E-3 and E-4 and visually impacted soil surrounding the USTs were removed from the site in 1991. A detailed account of site UST removal activities is presented in the *Final Technical Report for Tank Removal Operations* (Roy F. Weston, September 1991). In 1991, after tank removal activities had been completed, Weston installed groundwater monitoring well MW-19 in the area immediately adjacent to the excavation to determine whether groundwater had been impacted by previous operations conducted at the facility. The results of the groundwater sampling activities conducted at that time did not identify the presence of VOCs at concentrations above the method detection limits with the exception of 2-Butanone (MEK).

On November 30, 1994, Weston began the excavation of DEHP impacted soils in the MW19/HS1 area. Four additional excavation events were conducted on December 6, 12, 16, and 20, 2004, as a result of post excavation sampling results showing elevated concentrations of DEHP above site cleanup objectives at depth. The final size of the excavation was approximately 70 feet long,

ranged from 16 to 33 feet in width, and had an average depth of 9 feet below grade. Approximately 190 cubic yards of soil were removed from the excavation in 4Q04. Based on a review of historical data presented in the report entitled *Second Quarter Progress Report* (Roy F. Weston, Inc., August 1996), post excavation sample analytical results for DEHP from the excavation sidewalls ranged in concentration from 0.24 mg/kg to 140 mg/kg. Some of which were in exceedence of the DEHP impact to groundwater soil cleanup criteria outlined in the 1994 record of decision (ROD) of 100 mg/kg. Post excavation confirmatory soil samples for benzene, toluene, ethylbenzene, and xylenes [(BTEX) for the MW-19 Hot Spot] were collected but did not show BTEX concentrations above site specific cleanup criteria. As a result no further excavation was performed in this area. Documentation within the report entitled *Quarterly Progress Report* (Roy F. Weston, April 1995) outlining that the excavation was stopped within 5 feet of monitoring well MW-19 [presumably to avoid destruction of the well], within 6 feet of Building 9, to a total depth of 9 feet below ground level (bgl) to avoid potentially undermining the buildings foundation, suggests there is a possibility that contamination remains at depth which continues to act as the source of detected dissolved phase contamination in downgradient monitoring wells MW-19-5 and MW-19-7.

Quarterly groundwater sampling events conducted at MW-19 by Weston during first and second quarter 1995 identified the presence of benzene, toluene, ethylbenzene, and xylene (BTEX), in addition to MEK, at concentrations exceeding the New Jersey Department of Environmental Protection Groundwater Quality Standards (NJGWQS) stipulated in the ROD. In October 1996, Weston submitted a delineation plan to the New Jersey Department of Environmental Protection (NJDEP) to further define the extent of VOC impact to groundwater and further delineate both VOC and DEHP impact to saturated and non-saturated soils in the MW19/HS1 area. Temporary monitoring wells were installed and sampled and soil samples were collected and analyzed. The results of chemical analyses performed on the groundwater samples collected from the temporary monitoring wells identified the presence of VOCs at concentrations similar to those identified in monitoring well MW-19 in 1995. Additionally, the soil samples collected at both B3 and B2A indicated DEHP concentrations of 790 mg/kg and 220 mg/kg respectively, exceeding the "Impact to Groundwater Soil Cleanup Objective" of 100 mg/kg outlined in the 1994 ROD.

where are these locations

RMT received approval of an additional MW19/HS1 area groundwater delineation plan in January 1998. Subsequently, in February 1998, RMT conducted a subsurface investigation that included the installation and sampling of an additional five groundwater monitoring wells (MW19-1 through MW-19-5). VOC concentrations exceeding the NJGWQS were identified at MW19-1 (center of the plume); MW19-2; MW19 and at MW19-5. However, when compared to the VOC concentrations found during Weston's 1996 sampling (BW-1 through BW-9), significant reductions in the concentrations of VOCs were found at monitoring wells MW19 and

MW19-2. As no remedial action had been performed (other than the 1994 soils excavation), it was concluded that natural attenuation of the volatile groundwater contaminants (toluene, ethylbenzene, xylene) was likely occurring. Groundwater samples were also analyzed for the presence of DEHP. DEHP concentrations exceeding NJGWQS were found at MW19-1 (center of the plume) and at MW19-5 (downgradient well).

New Jersey Department of Environmental Protection's letter dated July 15, 1998, required LEC to further delineate the downgradient extent of BTEX and DEHP impact to groundwater in the MW19/HS1 area and establish a clean zone for both parameters in accordance with the Technical Requirements for Site Remediation (N.J.A.C. 7:26E-4.4). RMT, on behalf of LEC, prepared an investigation workplan and submitted it to the NJDEP in November 1998. Per the discussions and correspondence with NJDEP (December 21, 1998), RMT was authorized to perform a groundwater screening investigation utilizing Hydropunch® or other similar methodology.

Off-site Hydropunch® sampling activities were performed on April 21, 1999. Significant difficulties advancing the Hydropunch® tool in the approved off-site locations were encountered due to the localized geology (large cobbles and boulders) seen at the LEC site. A total of 24 advancement attempts were made, four of which (HP-1 through HP-4) penetrated the water table. Results of the Hydropunch® investigation are documented in the report entitled *MW-19/Hot Spot 1 Off-Site Subsurface Investigation* (RMT, June 1999). Analytical results obtained from groundwater samples collected from the four Hydropunch® locations did not reveal concentrations of either BTEX or DEHP above site specific cleanup criteria. This suggested that no off-site migration of contaminants of concern was occurring.

In NJDEP's comment letter regarding the 3<sup>rd</sup> Quarter 2005 Monitoring Report dated December 27, 2005, NJDEP voiced their concern over the high levels of toluene detected in MW-19-5. In their letter, NJDEP claimed that free product must be present and requested a vapor intrusion evaluation be performed on both the north and south sides of Ross St. in accordance with the new NJDEP Vapor Intrusion Guidance Document dated October 2005, and updated March 2006.

RMT responded to the December 27, 2005 letter in the 4<sup>th</sup> Quarter Groundwater Monitoring Report dated February 2006. In that response, RMT pointed out that, according to the NJDEP's Vapor Intrusion (VI) Guidance Document (October 2005), a VI evaluation must be completed if a receptor is within 30 feet of a BTEX plume (or within 100 feet if product is present). RMT continued on to say that the site currently has no free product issue as evidenced by the use of oil-water interface probes in the most contaminated monitoring wells within the MW-19/Hot Spot 1 area (e.g., MW-19, MW-19-5, and MW-19-7) that have never detected any product in any well. The lack of free product is also evidenced by the fact that all individual BTEX

concentrations are well below each parameters solubility limit. However, part of the LEC Building 9 (Figure 2) lies within 30 feet of the area with residual soil and groundwater contamination, and therefore a soil vapor intrusion evaluation work plan was submitted in Section 4.4 of the 4<sup>th</sup> Quarter 2005 Quarterly Groundwater Monitoring Report.

This work plan was discussed with and approved by NJDEP during the conference call held on February 22, 2006. NJDEP formalized their approval to proceed with the scope of work outlined in the workplan in an email sent the same day. The soil gas investigation was performed on March 1 and 2, 2006. This report provides the data and conclusions from implementation of the soil gas work plan.

# Section 2

## Soil Gas Field Procedures

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### 2.1 Objectives

The first objective of the soil vapor intrusion evaluation was to 1) comply with the NJDEP and United States Environmental Protection Agency (USEPA) comments dated December 22, 2005, following their review of the 3<sup>rd</sup> Quarter Monitoring Report (RMT, October 19, 2005), 2) follow the scope of work outlined in Section 4.4 of the 4<sup>th</sup> Quarter 2005 Quarterly Groundwater Monitoring Report acknowledged by NJDEP in the general comments outlined in their letter dated February 22, 2006, and 3) adhere to the verbal agreements made between RMT and NJDEP during the February 22, 2006 conference call held to generally discuss the soil gas sampling scope of work (*i.e.*, the elimination of both the indoor and background ambient air samples and the addition of two soil gas sample locations to the far east and west of the of the existing three soils gas samples proposed along the Ross Street/LEC shoulder and minor sample location adjustments) and schedule for implementation. In accordance with NJDEP's request, RMT memorialized the agreements made on the February 22, 2006 conference call by emailing information pertaining to sampling methodology and the revised sampling locations on February 24, 2006.

The second objective was to determine the extent of soil gas within the MW-19/Hot Spot 1 area, evaluate whether soil vapor concentrations could be migrating across Ross St. from the residual contamination near Building 9, determine soil vapor concentrations at the selected testing locations, and distribution of soil gas in exceedence of NJDEP's Generic Vapor Intrusion Screening Levels.

### 2.2 Sampling Methodology

RMT conducted the soil gas investigation activities on March 1, 2006, in accordance with the October 2005 NJDEP Vapor Intrusion Guidance and the NJDEP Revised Field Sampling Procedures Manual (August 2005).

RMT contracted a New Jersey Licensed Well Driller to advance sampling points utilizing a Geoprobe® drill rig to facilitate the collection of soil gas samples within the vadose zone. Prior to the start of the soil vapor instruction evaluation drilling activities, an RMT technician collected a round of water levels measurements from the MW-19/Hot Spot 1 area to determine real-time water-table levels. This enabled the field staff to verify that soil gas samples would be



collected at an appropriate depth in accordance with the Vapor Intrusion Guidance manual. Depth to the water table in the MW-19 area ranged from 7.6 – 9.6 feet bgl, with an average depth of approximately 8.3 feet bgl. The Vapor Intrusion Guidance manual specifies that soil gas samples must be collected *at least* 5 feet bgl, and *at least* 1 foot above the capillary fringe (essentially +/-1 foot above the water table). Therefore, each soil gas sample was collected between 6 and 6.5 feet bgl. It is also important to note that this was the maximum depth achievable given geologic conditions. A total of seven geoprobe borings were advanced (Figure 2). The all terrain vehicle (ATV) geoprobe unit was not able to access Building 9 to drill sub-slab locations, so holes were cut through the concrete floor using a hammer drill. A hand auger was then used to try to reach the appropriate depth. However, the maximum depth that could be reached below the building floor was about 2 to 3 feet and therefore soil vapor samples could not be obtained from inside the building.

Enviroprobe utilized the Geoprobe's® Post Run Tubing (PRT) system (as described in the February 24, 2006 email). The PRT system uses a sacrificial point, and sample tubing to collect the soil gas samples. The sample tubing was purged with a Photo Ionization Detector (PID) while the RMT staff connected the flow meter to a 1-L stainless steel summa canister. The flow meter was set to ~167 mL/ min. The summa canister filled in approximately five minutes and was left with a vacuum of 5" of Mercury (Hg). This was done to tell if the samples leaked during shipment to the lab. Ambient and canister pressures were recorded along with temperature and time (Appendix C).

RMT submitted all samples to @ Air Toxics Ltd, located in Folsom, California for modified EPA TO-15- Volatile Organic Compounds by GC/MS Full Scan Standard List. Laboratory result sheets have been included as Appendix D.

# Section 3

## Results & Conclusions

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### 3.1 Soil Vapor Intrusion Evaluation Results

Table 2 provides a summary of all analytical results and Figure 3 shows the soil gas sampling locations and associated exceedences. As shown on Table 2 and Figure 3, only two constituents were detected above the NJDEP Generic Vapor Intrusion Screening Levels criteria in the seven soil gas samples collected. Benzene and 1,3-Butadiene were detected in SG-06-01, and SG-06-04 through SG-06-07 above the residential screening levels. Benzene was also detected above the residential screening level in SG-06-03. Soil gas sample location SG-06-02, a downgradient location closest to the north side of Ross Street, did not exceed screening levels for any constituent tested.

### 3.2 Conclusions and Recommendations

As would be expected, it appears the detectable soil gas constituents are collocated with the dissolved-phase concentrations in groundwater as shown on Figure 3.

Based on the groundwater hydraulics (see groundwater contours presented on Figure 3) and given Darcy's mathematical law governing groundwater flow, groundwater with dissolved-phase concentrations of COCs, cannot migrate directly north across Ross Street and therefore does not pose a risk to the Ross Street residences. The lack of risk from direct northward groundwater migration is also further substantiated by the lack of detectable COCs in both MW-19D and MW-19-8. However, as described in previous monitoring reports, the current groundwater flow direction suggests that the leading edge of the dissolved COCs in groundwater may be migrating northeasterly towards an empty lot adjacent to a Ross Street residence, which is the reason we will be installing an additional well (MW-19-12) as proposed in the approved PRMP.

Based on the following conclusions, it is possible that dissolved contaminants in groundwater and resulting soil gas levels, if any are detectable in proposed well MW-19-12, will show there are little to no significant risks to the Ross Street residences: 1) the current leading-edge concentrations (MW-19-7) are relatively low and continue a historical downward trend (see trend diagrams included in quarterly groundwater monitoring reports), and 2) the pertinent publicly available literature shows that active degradation of BTEX occurs at most sites worldwide, which agree well with the MNA analysis presented in the 4Q05 and 1Q06

groundwater monitoring reports (showing that biodegradation of residual contaminants is actively taking place in the MW-19 area).

RMT recommends that vapor testing be conducted inside Building 9 adjacent to the area with highest groundwater concentrations because this part of the building falls within the 30-foot radius of where we believe residual contamination still remains in the vadose zone. In addition, we recommend that a representative soil gas sample be collected while installing proposed well MW-19-12, in order to provide additional assurance that there are no exposure risks present associated with the MW-19 area.

At this time, we do not recommend that any active remediation be considered for this area based on the currently available data. As described in the first and second quarterly reports for 2006, natural attenuation processes are very strong in this area, and based on currently available data no risk of exposure exists. Current data strongly supports information contained in RMT's May 2000 "Evaluation of Remediation of Groundwater by Natural Attenuation" and subsequent May 2001 "Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater" approved by NJDEP on January 24, 2002.

Furthermore, all data show that there is no free light non-aqueous phase liquid (LNAPL) product present in this area. However, active remediation may be considered for this area once the proposed well MW-19-12 has been installed, sampled, and tested.

# Tables

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**Table 1**  
**Groundwater Elevations - Soil Gas Investigation**  
**L.E. Carpenter and Company (LEC)**  
**Borough of Wharton, Morris County, New Jersey**

WELL LOCATION <sup>(6)</sup>	WELL TYPE	PROFESSIONAL SURVEY INFORMATION <sup>(6)</sup>							QUARTERLY MEASUREMENT INFORMATION		
		BASELINE LOCATION (FT)		GEODETIC LOCATION		ELEVATION (FT. MSL)			MEAS. DATE	WATER DEPTH	WATER ELEVATION
		(Y) North	(X) East	LATITUDE	LONGITUDE	GROUND	OUTER CASING	INNER WELL			
GEI-2I	Piezometer	754573.99	470499.76	40° 54' 17.4"	74° 34' 43.1"	635.32	637.75	637.60	27-Feb-06	9.82	627.78
GEI-2S	Piezometer	754566	470506.18	40° 54' 17.3"	74° 34' 43.0"	634.86	637.27	637.07	27-Feb-06	9.92	627.15
GEI-3I	Piezometer	754311.79	470453.7	40° 54' 14.8"	74° 34' 43.7"	636.96	639.39	639.25	27-Feb-06	11.96	627.29
MW-15S	Monitoring Well	754326.58	470891.83	40° 54' 15.0"	74° 34' 38.0"	634.23	636.43	636.17	27-Feb-06	9.64	626.53
MW-15I	Monitoring Well	754325.8	470901.47	40° 54' 15.0"	74° 34' 37.9"	634.14	636.28	636.06	27-Feb-06	9.53	626.53
MW-19	Monitoring Well	754537.15	470454.45	40° 54' 17.1"	74° 34' 43.7"	636.22	636.23	635.90	27-Feb-06	8.61	627.29
MW-19-1	Monitoring Well	754534.52	470427.63	40° 54' 17.0"	74° 34' 44.0"	635.93	635.96	635.64	27-Feb-06	8.26	627.38
MW-19-2	Monitoring Well	754551.81	470429.56	40° 54' 17.2"	74° 34' 44.0"	636.46	636.50	636.30	27-Feb-06	8.96	627.34
MW-19-3	Monitoring Well	754539.4	470394.2	40° 54' 17.1"	74° 34' 44.5"	636.97	637.06	636.70	27-Feb-06	9.33	627.37
MW-19-4	Monitoring Well	754505.39	470432.08	40° 54' 16.7"	74° 34' 44.0"	635.69	635.76	635.43	27-Feb-06	7.99	627.44
MW-19-5	Monitoring Well	754565.53	470470.75	40° 54' 17.3"	74° 34' 43.5"	635.93	635.93	635.56	27-Feb-06	8.38	627.18
MW-19-6	Monitoring Well	754578.87	470443.1	40° 54' 17.5"	74° 34' 43.8"	636.17	636.16	635.82	27-Feb-06	8.57	627.25
MW-19-7	Monitoring Well	754595.66	470501.7	40° 54' 17.6"	74° 34' 43.1"	635.31	635.36	635.00	27-Feb-06	7.84	627.16
MW-19-8	Monitoring Well	754617.42	470493.65	40° 54' 17.8"	74° 34' 43.2"	635.82	635.82	635.36	27-Feb-06	8.22	627.14
MW-19-9D	Monitoring Well	754590	470442	40° 54' 17.9"	74° 34' 42.4"	636.39	636.41	636.10	27-Feb-06	8.09	628.01
MW-19-10	Monitoring Well	754625.75	470590.81	-	-	634.72	634.81	634.43	27-Feb-06	7.01	627.42
MW-19-11	Monitoring Well	754617.45	470546.95	40° 54' 18.2"	74° 34' 41.0"	634.22	634.26	633.67	27-Feb-06	6.68	626.99
SG-D1 <sup>(1)</sup>	Drainage Channel Staff Gauge	754428.57	471240.37	-	-	625.81	-	-	27-Feb-06	1.44	624.37
SG-D2 <sup>(1)</sup>	Drainage Channel Staff Gauge	754285.43	471361.24	-	-	626.26	-	-	27-Feb-06	1.16	625.10
SG-D3 <sup>(1)</sup>	Drainage Channel Staff Gauge	754381.47	471548.31	-	-	625.83	-	-	27-Feb-06	1.64	624.19
SG-R1	Rockaway River Staff Gauge	754313.99	470408.70	-	-	640.92	-	-	27-Feb-06	1.70	639.22
SG-R2 <sup>(10)</sup>	Rockaway River Staff Gauge	754056.10	470946.46	-	-	628.65	-	-	27-Feb-06	2.52	626.13

**FOOTNOTES**

- (1) Elevation measured at the top of a 3.33 ft. Staff gauge. Reference elevation (ground) shot at the top of the staff gauge.  
Water depth based on a visual observation of the water level on the Staff gauge.
- (3) Monitoring points and wells in **BOLD** included in the quarterly sampling program as outlined in the RMT letter dated January 13, 2005. Depth to water recorded before purging
- (4) All "19 series" wells were resurveyed August 8, 2001 at owners request. Wells MW19 through MW19-5 were converted to flush mount wells to allow for through traffic. Professional survey performed by James M. Stewart, Inc., Philadelphia, PA
- (6) Horizontal Datum: New Jersey State Plane Coordinate System NAD 83. Vertical Datum: NAVD 88

**MW-19**



TABLE 2  
SOIL GAS INVESTIGATION ANALYTICAL RESULTS (MARCH 2006)  
LE CARPENTER & COMPANY, WHARTON NEW JERSEY

CONSTITUENTS	UNITS	NJDEP Master Table Generic Vapor Intrusion Screening Levels		Soil Gas ID and Lab Number																	
				SG-06-01	SG-06-02	SG-06-03	SG-06-04	SG-06-05	SG-06-06	SG-06-07	Duplicate (SG-06-1	Lab Blank									
		SAMPLE DATE		1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06									
		SOIL GAS SCREENING LEVELS (RESIDENTAL) ppbv	STANDARD REFERENCE	Lab Sample # 0603056-05A	Lab Sample # 0603056-07A	Lab Sample # 0603056-06A	Lab Sample # 0603056-01A	Lab Sample # 0603056-02A	Lab Sample # 0603056-03A	Lab Sample # 0603056-04A	Lab Sample # 0603056-05AA	Lab Sample # 0603056-08A									
MODIFIED TO-15																					
1,1,1-Trichloroethane	ppbv	9,400	1	1.4	8	<	2.4	<	1.2	<	1.2	<	3	1.2	<	0.5					
1,1,2,2-Tetrachloroethane	ppbv	5	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,1,2-Trichloroethane	ppbv	5	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,1-Dichloroethane	ppbv	6,300	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,1-Dichloroethene	ppbv	2,800	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,2,4-Trichlorobenzene	ppbv	25	1	UJ	4.8	UJ	4.8	UJ	9.7	UJ	4.8	J	5.7	UJ	4.8	UJ	12	UJ	4.8	UJ	2
1,2,4-Trimethylbenzene <sup>2</sup>	ppbv	--	1	3.5	2.2	2.8	<	1.2	2.7	2	<	3	3.1	<	0.5						
1,2-Dibromoethane (EDB)	ppbv	5	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,2-Dichlorobenzene	ppbv	1,200	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,2-Dichloroethane	ppbv	5	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,2-Dichloroethene (cis) <sup>2</sup>	ppbv	--	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,2-Dichloroethene (trans)	ppbv	780	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,2-Dichloroethene (total)	ppbv	410	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,2-Dichloropropane	ppbv	5	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,3,5-Trimethylbenzene <sup>2</sup>	ppbv	--	1	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	1.3	<	0.5				
1,3-Butadiene	ppbv	5	1	56	2	9.2	33	98	5.1	36	52	<	0.5								
1,3-Dichlorobenzene	ppbv	91	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,3-Dichloropropene (cis) <sup>3</sup>	ppbv			<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,3-Dichloropropene (trans) <sup>3</sup>	ppbv			<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,3-Dichloropropene <sup>3</sup>	ppbv	7	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,4-Dichlorobenzene	ppbv	5	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
1,4-Dioxane	ppbv			<	4.8	<	4.8	<	9.7	<	4.8	<	4.9	<	4.8	<	12	<	4.8	<	2
2,2,4-Trimethylpentane <sup>2</sup>	ppbv	--		E	510	200	720	440	E	490	E	750	580	490	E	<	0.5				
2-Butanone (Methyl Ethyl Ketone)	ppbv	87,000	1	39	4.8	15	6.6	21	6.9	5.7	39	<	0.5								
2-Hexanone	ppbv			<	4.8	<	4.8	<	9.7	<	4.8	<	4.9	<	4.8	<	12	<	4.8	<	2
2-Propanol	ppbv			5.3	<	4.8	<	9.7	<	4.8	5.5	<	4.8	<	12	<	4.8	<	2		
3-Chloropropene	ppbv	5		<	4.8	<	4.8	<	9.7	<	4.8	<	4.9	<	4.8	<	12	<	4.8	<	2
4-Ethyltoluene <sup>2</sup>	ppbv	--		1.9	1.2	<	2.4	<	1.2	2	<	1.2	<	3	1.9	<	0.5				
4-Methyl-2-pentanone	ppbv	38,000	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
Acetone	ppbv	69,000	1	480	96	360	150	370	250	200	450	<	2								
alpha-Chlorotoluene	ppbv	51	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
Benzene	ppbv	5	1	10	1.8	4.9	10	15	7.2	9.4	11	<	0.5								
Bromodichloromethane	ppbv	5	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
Bromoform	ppbv	8	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
Bromomethane	ppbv	66	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		
Carbon Disulfide	ppbv	12,000	1	3.3	1.4	8.3	1.5	15	6.4	3	3.2	<	0.5								
Carbon Tetrachloride	ppbv	5	1	<	1.2	<	1.2	<	2.4	<	1.2	<	1.2	<	3	<	1.2	<	0.5		



TABLE 2  
SOIL GAS INVESTIGATION ANALYTICAL RESULTS (MARCH 2006)  
LE CARPENTER & COMPANY, WHARTON NEW JERSEY

CONSTITUENTS	UNITS	NJDEP Master Table Generic Vapor Intrusion Screening Levels		Soil Gas ID and Lab Number									
				SG-06-01	SG-06-02	SG-06-03	SG-06-04	SG-06-05	SG-06-06	SG-06-07	Duplicate (SG-06-1	Lab Blank	
		SAMPLE DATE		1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	1-Mar-06	
		SOIL GAS SCREENING LEVELS (RESIDENTAL) ppbv	STANDARD REFERENCE	Lab Sample # 0603056-05A	Lab Sample # 0603056-07A	Lab Sample # 0603056-06A	Lab Sample # 0603056-01A	Lab Sample # 0603056-02A	Lab Sample # 0603056-03A	Lab Sample # 0603056-04A	Lab Sample # 0603056-05AA	Lab Sample # 0603056-08A	
MODIFIED TO-15													
Chlorobenzene	ppbv	670	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Chloroethane	ppbv	41	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Chloroform	ppbv	5	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Chloromethane	ppbv	2,300	1	< 4.8	< 4.8	< 9.7	< 4.8	< 4.9	< 4.8	27	< 4.8	< 2	
Cumene	ppbv			< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Cyclohexane	ppbv	90,000	1	2.9	< 1.2	< 2.4	3.2	2	2.5	< 3	3	< 0.5	
Dibromochloromethane	ppbv	5	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Ethanol	ppbv			39	11	30	6.2	14	10	13	39	< 2	
Ethyl Benzene	ppbv	12,000	1	2.9	1.9	2.6	2.5	2.8	2.1	< 3	3	< 0.5	
Freon 11	ppbv	6,500	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Freon 113	ppbv			< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Freon 114	ppbv			< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Freon 12	ppbv			< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Heptane <sup>2</sup>	ppbv	--		6.5	2.3	5.8	8.6	8.3	5.9	6.1	6.2	< 0.5	
Hexachlorobutadiene	ppbv	5	1	< 4.8	< 4.8	< 9.7	< 4.8	< 4.9	< 4.8	< 12	< 4.8	< 2	
Hexane	ppbv	3,000	1	23	< 1.2	3.3	20	8.7	12	8.1	20	< 0.5	
Methyl tert-butyl ether	ppbv	22	1	4.9	1.5	< 2.4	7.1	7.6	2.6	5	4.1	< 0.5	
Methylene Chloride	ppbv	55	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Propylbenzene	ppbv			< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Styrene	ppbv	12,000	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Tetrachloroethene	ppbv	5	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Tetrahydrofuran	ppbv			< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Toluene	ppbv	68,000	1	19	8.4	13	20	22	14	15	19	< 0.5	
Trichloroethene	ppbv	5	1	< 1.2	< 1.2	< 2.4	< 1.2	< 1.2	< 1.2	< 3	< 1.2	< 0.5	
Vinyl Chloride	ppbv	5	1	1.5	< 1.2	< 2.4	< 1.2	< 1.2	2.1	< 3	1.4	< 0.5	
Xylene (m, p) <sup>3</sup>	ppbv			8.8	5.6	8	6.7	8.5	5.9	4.1	9.3	< 0.5	
Xylene (o) <sup>3</sup>	ppbv			3.1	2	2.6	2.4	2.4	2.1	< 3	2.9	< 0.5	
Xylene (total) <sup>3</sup>	ppbv	1,300	1	11.9	7.6	10.6	9.1	10.9	8	4.1	12.2	< 0.5	

Notes

1. Shaded/Bolded values - Detections that exceed the selected NJDEP Standard.
  2. Screening levels are unavailable due to the absence of toxicity information.
  3. The concentrations of each isomer are added if multiple isomers are present and the results compared to the total screening level.
- SG = Soil Gas Sample  
ppbv = parts per billion by volume  
UJ = Non-detected compound associated with low bias in the CCV.  
E = Exceeds instrument calibration range  
J = Estimated value due to bias in the CCV

Standard Reference

1. NJDEP Vapor Intrusion Guidance- Table 1; NJDEP Master Table- Generic Vapor Intrusion Screening Levels

# Figures

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Plot Time:  
Attached Xrefs:

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Tuesday, April 11, 2006

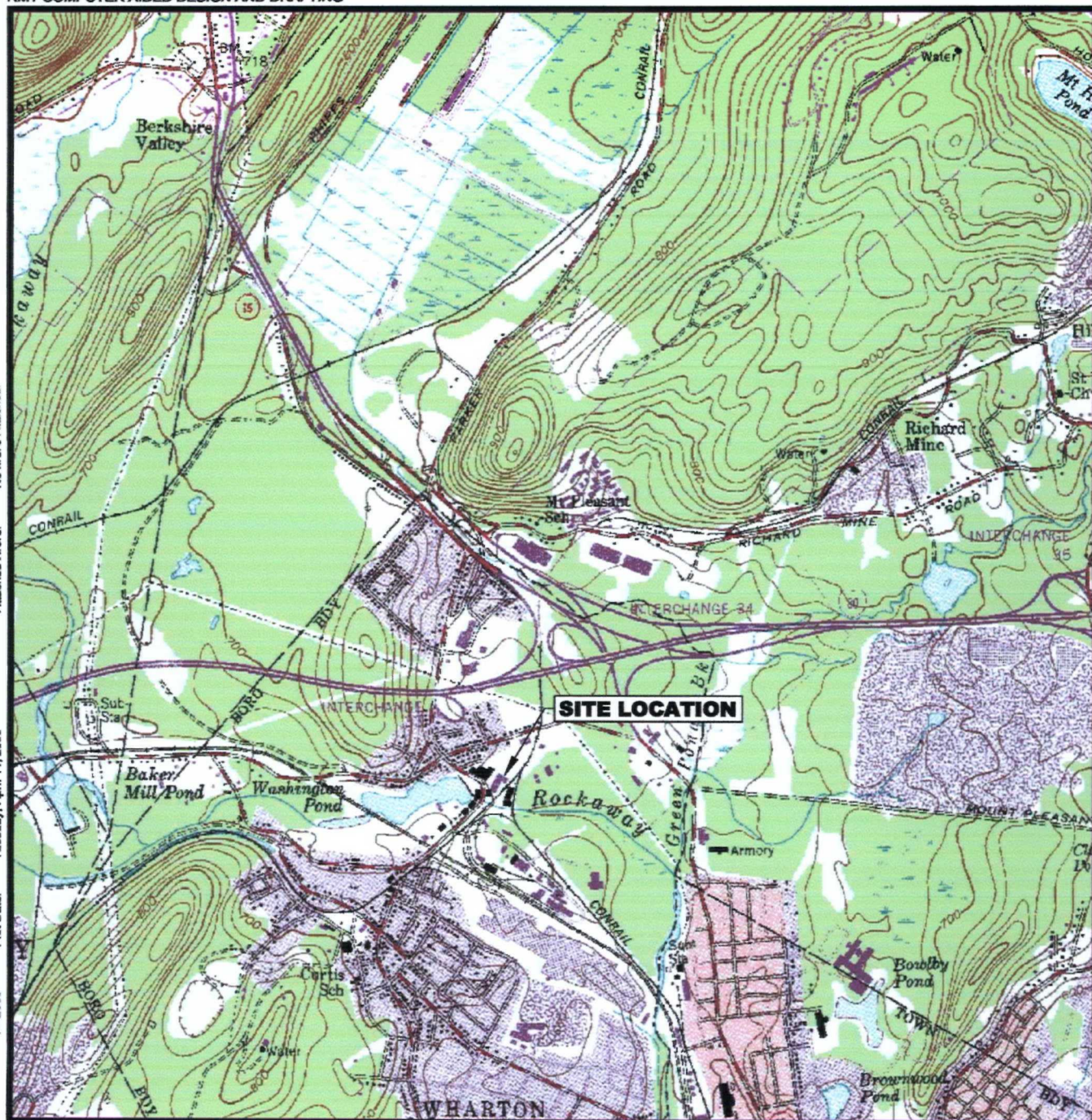
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Operator Name:  
Scale:

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PLOT DATA  
Drawing Name:



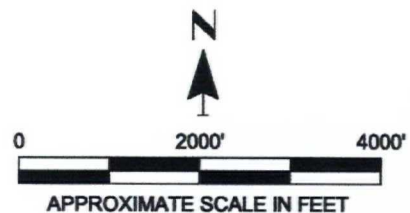
NEW JERSEY



QUADRANGLE LOCATION

**SOURCE**

BASE MAP DEVELOPED FROM THE DOVER, NEW JERSEY 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP, DATED 1954, PHOTOREVISED 1981.



APPROXIMATE SCALE IN FEET



**LE CARPENTER  
WHARTON, NEW JERSEY**

**SITE LOCATION MAP**

DRAWN BY:	SL
APPROVED BY:	JO
PROJECT NUMBER:	6527.21
FILE NUMBER:	6527.21.01.DWG
DATE:	APRIL 2006

**FIGURE 1**

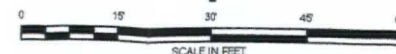




1994 SOIL EXCAVATION

---- GAS ---- GAS  
 ----- STM ----- REGIONAL STORM SEWER LINE  
 ----- W ----- WATER  
 ----- SAN ----- SANITARY SEWER  
 MH ○ MANHOLE

1. BASE MAP DEVELOPED FROM TOPOGRAPHIC SURVEY PROVIDED BY JAMES M. STEWART, INC. LAND SURVEYORS, DRAWING NO 2793-03.DWG, DATED 02-14-02.
2. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON FEBRUARY 27, 2006.
3. NS = NOT SAMPLED.
4. OVERHEAD POWER LINES ROUGHLY PARALLEL TO SANITARY SEWER, GAS AND WATER LINES.




5.					
4.					
3.					
2.					
1.					
NO.	BY	DATE	REVISION	APP'D.	

**LE CARPENTER  
WHARTON, NEW JERSEY**

**SITE PLAN WITH  
SOIL GAS SAMPLE LOCATIONS**

DRAWN BY:	SL	SCALE:	PROJECT NO.	6527.21
DESIGNED BY:	JO	SHOWN	FILE NO.	6527.21.02.DWG
APPROVED BY:	NC	DATE PRINTED:	<b>FIGURE 2</b>	
DATE:	MAY 2006			

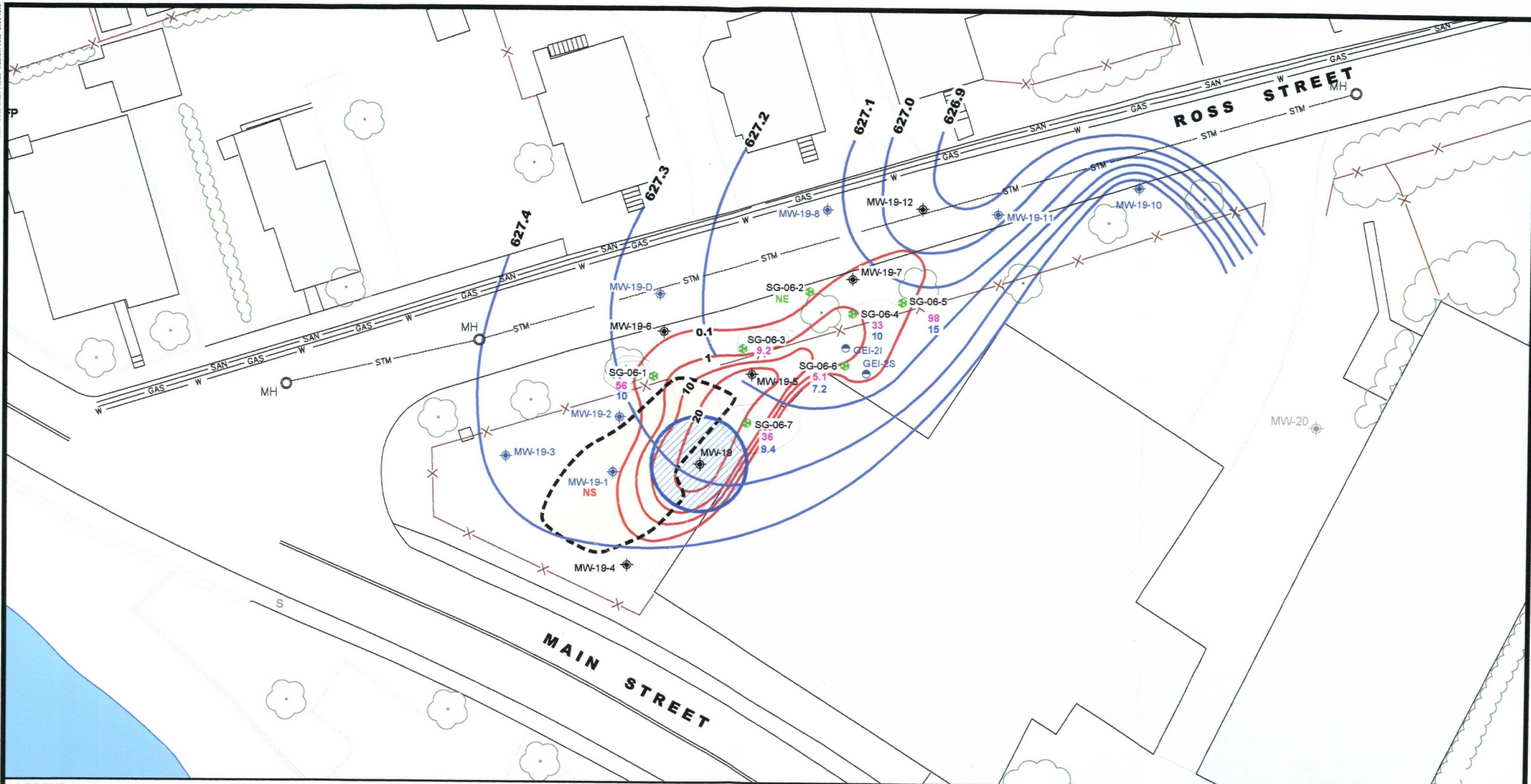


**RMT** INC.

3754 Bomberso Drive  
Ann Arbor, MI 48106-2771

PHONE: 313-871-7090  
FAX: 313-871-9222





# LEGEND

- |                     |  |             |  |
|---------------------|--|-------------|--|
| MW-20               | ABANDONED MONITORING WELL LOCATION AND NUMBER  | --- GAS --- | GAS  |
| MW-19-7<br>2.86     | QUARTERLY MONITORING WELL LOCATION AND NUMBER WITH CONCENTRATION OF TOTAL BTEX (mg/L)        | --- STM --- | REGIONAL STORM SEWER LINE  |
| GEI-2I              | QUARTERLY STATIC WATER LEVEL MONITORING LOCATION   | --- W ---   | WATER  |
| *                   | FENCE LINE   | --- SAN --- | SANITARY SEWER   |
| SG-06-1<br>56<br>10 | SOIL GAS SAMPLE LOCATION AND NUMBER WITH CONCENTRATION OF 1,3 - BUTADIENE AND BENZENE (ppmv) | MH          | MANHOLE  |
| [---]               | 1994 SOIL EXCAVATION   | 10          | ISOCONCENTRATION CONTOUR FOR TOTAL MAXIMUM BTEX (ppm) IN GROUNDWATER |
|                     |  | NE          | NO EXCEEDENCES   |

## NOTES

1. BASE MAP DEVELOPED FROM TOPOGRAPHIC SURVEY PROVIDED BY JAMES M. STEWART, INC. LAND SURVEYORS, DRAWING NO 2793-03.DWG, DATED 02-14-02.
2. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON FEBRUARY 27, 2006.
3. NS = NOT SAMPLED.
4. OVERHEAD POWER LINES ROUGHLY PARALLEL TO SANITARY SEWER, GAS AND WATER LINES.

5.					
4.					
3.					
2.					
1.					
NO.	BY	DATE	REVISION	APP'D.	

L.E. CARPENTER  
WHARTON, NEW JERSEY

SOIL GAS SAMPLING LOCATIONS AND  
EXCEEDENCES OF THE GENERIC VAPOR  
INTRUSION SCREENING LEVELS

DRAWN BY:	SL	SCALE:	SHOWN	PROJECT NO.	6527.21
CHECKED BY:	JO	DATE:	DATE PRINTED:	FILE NO.	6527.21.03.DWG
APPROVED BY:	NC				
DATE:	MAY 2006				

FIGURE 3

RMT INC.

3754 Ranchero Drive  
Ann Arbor, MI 48106-2771  
PHONE: 313-871-7080  
FAX: 313-871-8022

**Appendix A**  
**NJDEP Letter dated December 22, 2005**



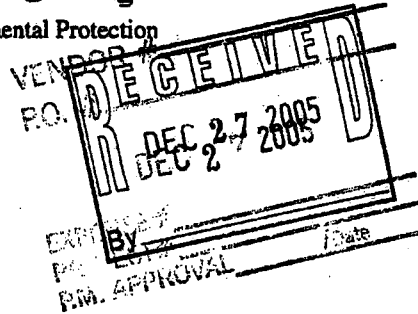
## State of New Jersey

Department of Environmental Protection

Richard J. Codey  
Acting Governor

Bradley M. Campbell  
Commissioner

Christopher Anderson  
Director Environmental Affairs  
L.E. Carpenter and Company  
33587 Walker Road  
Avon Lake, OH 44012



DEC 22 2005

Re: L.E. Carpenter Superfund Site  
Wharton Borough, Morris County, New Jersey

The New Jersey Department of Environmental Protection (NJDEP or Department) as well as the United States Environmental Protection Agency (USEPA) have completed a review of the 3<sup>rd</sup> Quarter Monitoring Report dated October 19, 2005. This document was prepared by RMT, Inc. on behalf of L.E. Carpenter and Company (LE). The NJDEP finds the report to be conditionally acceptable provided the following comments are addressed.

### General Comments:

LE should note that all of the Natural Attenuation parameters collected, as part of the sampling effort shall be summarized and a discussion provided.

This report provided sampling results of ground water monitoring well samples collected in July 2005 following the conclusion of the source reduction excavations. The results of the sampling confirmed a persistent area of ground water contamination in the vicinity of monitoring wells MW-19 and MW-19-5.

There appears to be some uncertainty with regard to the specific flow path and extent of the contamination based on the current monitoring well network, and recent quarterly reports have recommended adding one or more monitoring wells to help delineate the groundwater plume. The NJDEP/USEPA recommend, however that source area impacted by soils be delineated and a treatment proposed which may help alleviate the need for establishing an Operable Unit - 2, groundwater at the site.

Also, a review of the sampling results indicate high levels of toluene in MW-19-5. According to the NJDEP's Vapor Intrusion Guidance Document (October 2005), a vapor intrusion evaluation must be completed if a receptor is within 30 feet of a BTEX plume or 100 feet if product is suspected. Three residences on Ross Street are within the 100-foot criterion. The high levels of toluene suggest that residual product may be present. Therefore, a vapor intrusion evaluation must be performed. The NJDEP recommends that soil gas samples be taken on the LE side of Ross Street, as well as, on the opposite side of Ross Street (i.e. right of way). LE should be aware that due to the close proximity of residential homes and the persistence of this contaminated source, the NJDEP/USEPA cannot concur with continued monitoring. LE shall propose a work plan within thirty (30) days upon receipt of this correspondence which addresses these issues.

### Specific Comments:

Section 2.4; Delineation of Groundwater Contamination, page 2-3: The groundwater sample results from MW-19 and MW-19-5 reported a significant increase in contaminants over previous sampling rounds. Whether this is due to the revised sampling protocol or an actual spike at the source area is not discussed, however the levels suggest that LE consider a more aggressive approach (i.e. active remediation) for the source at the MW-19 area.

Section 3.2, Rockaway River, page 3.2: The report states that surface water sampling at the eastern drainage ditch as well as the Rockaway River and Washington Forge Pond will continue as part of the quarterly sampling. Sample location SW-R-6 shall also be included in the quarterly monitoring.

Section 4.3, Post Source Reduction Site Monitoring, page 4-1: The report states that the proposed site monitoring network will include one additional shallow monitoring well for the MW-19 area. The location of the proposed well is acceptable. The NJDEP must be provided with any details on the installation as well as a schedule for when the monitor well be installed.

Should you have any questions please contact me at (609) 633-1416.

Sincerely,



Anthony Cinque, Case Manager  
Bureau of Case Management

C: Nicholas Clevett, RMT  
Stephen Cipot, USEPA  
Robert Alvey, USEPA  
George Blyskun, BGWPA  
John Prendergast, BEERA

# **Appendix B**

## **Soil Gas Sampling Location Boring Logs**



## SOIL BORING LOG

BORING NO. SG-06-1

Page 1 of 1

Facility/Project Name: <b>L.E. Carpenter Soil Gas</b>		Date Drilling Started: <b>3/1/06</b>	Date Drilling Completed: <b>3/1/06</b>	Project Number: <b>6527.21</b>	
Drilling Firm: <b>Enviroprobe</b>	Drilling Method: <b>Macro Sample</b>	Surface Elev. (ft)	TOC Elevation (ft) <b>—</b>	Total Depth (ft bgs) <b>6.0</b>	Borehole Dia. (in) <b>2</b>
Boring Location:		Personnel Logged By - E. Vincke Driller -		Drilling Equipment: <b>Geoprobe</b>	
Civil Town/City/or Village: <b>Wharton</b>	County: <b>Morris</b>	State: <b>New Jersey</b>		Water Level Observations: While Drilling:      Date/Time After Drilling:      Date/Time Depth (ft bgs) Depth (ft bgs)	

SAMPLE		BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
NUMBER AND TYPE	RECOVERY (%)							
1 GP	69		1	Sand- mostly very fine sand, few coarse sand, trace medium sand, trace subangular gravels, loose, no odor, dry, very dark gray (7.5YR3/1), timber present.	SW			
			2	Sand- mostly fine sand, little silt, trace gravel, moist, no odor, compact, dark brown (7.5YR3/2).	SP-SM		0	
			3	Sand- mostly fine sand, trace cobbles, moist, loose, no odor, brown (7.5YR4/3).	SP		0	
			4					
			5				0	
			6	End of boring 6.0'.				Soil gas sample collected.
			7					
			8					
			9					

SOIL BORING WELL CONSTRUCTION LOG 3-01-06.GPJ RMT CORP.GDT 4/10/06

Signature:	Firm: <b>Grand Rapids</b> <b>2025 E. Beltline Ave. Ste 402 Grand Rapids</b>	<b>616-975-5415</b> <b>Fax 616-975-1098</b>
------------	--	--

Checked By: JJD



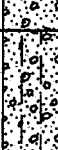





## SOIL BORING LOG

BORING NO. SG-06-2

Page 1 of 1

Facility/Project Name: <b>L.E. Carpenter Soil Gas</b>		Date Drilling Started: <b>3/1/06</b>	Date Drilling Completed: <b>3/1/06</b>	Project Number: <b>6527.21</b>		
Drilling Firm: <b>Enviroprobe</b>	Drilling Method: <b>Macro Sample</b>	Surface Elev. (ft)	TOC Elevation (ft) <b>---</b>	Total Depth (ft bgs) <b>6.0</b>	Borehole Dia. (in) <b>2</b>	
Boring Location:		Personnel Logged By - E. Vincke Driller -		Drilling Equipment: <b>Geoprobe</b>		
Civil Town/City/or Village: <b>Wharton</b>	County: <b>Morris</b>	State: <b>New Jersey</b>	Water Level Observations: While Drilling:      Date/Time After Drilling:      Date/Time Depth (ft bgs) Depth (ft bgs)			
SAMPLE		LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
NUMBER AND TYPE	RECOVERY (%)					
 1 GP	67	1	SW		0	Soil gas sample collected.
		2				
		3	SP-SM		0	
		4				
		5	SP		0	
		6				
		6	End of boring 6.0'.			
		7				
		8				
		9				

SOIL BORING WELL CONSTRUCTION LOG 3-01-08.GPJ RMT CORP.GDT 4/10/06

Signature:	Firm: <b>Grand Rapids</b> <b>2025 E. Beltline Ave. Ste 402 Grand Rapids</b>	<b>616-975-5415</b> <b>Fax 616-975-1098</b>
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Checked By: JJD

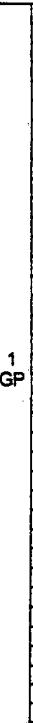
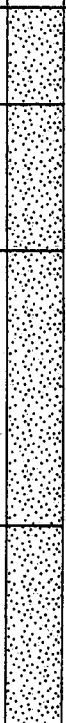
Checked By: JJD



## SOIL BORING LOG

BORING NO. SG-06-4

Page 1 of 1

Facility/Project Name: <b>L.E. Carpenter Soil Gas</b>		Date Drilling Started: <b>3/1/06</b>	Date Drilling Completed: <b>3/1/06</b>	Project Number: <b>6527.21</b>			
Drilling Firm: <b>Enviroprobe</b>	Drilling Method: <b>Macro Sample</b>	Surface Elev. (ft)	TOC Elevation (ft) <b>---</b>	Total Depth (ft bgs) <b>6.0</b>	Borehole Dia. (in) <b>2</b>		
Boring Location:		Personnel Logged By - E. Vincke Driller -		Drilling Equipment: <b>Geoprobe</b>			
Civil Town/City/or Village: <b>Wharton</b>	County: <b>Morris</b>	State: <b>New Jersey</b>	Water Level Observations: While Drilling:      Date/Time After Drilling:      Date/Time		Depth (ft bgs) Depth (ft bgs)		
SAMPLE		LITHOLOGIC DESCRIPTION		USCS	GRAPHIC LOG		
NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET		PID (PPM)		
			1	Sand- mostly very fine sand, trace medium sand, loose, no odor, dry, very dark gray (7.5YR3/1).	SP		
			2	Sand- mostly fine sand, loose, no odor, dry, strong brown (7.5YR4/6).	SP		
			3	Sand- mostly very fine sand, trace fine sand, dry, loose, no odor, very dark gray (7.5YR3/1).	SP		
			4				
			5	Sand- mostly fine sand, little coarse sand, few cobbles, dry, no odor, loose, brown (7.5YR4/3).	SP		
			6	End of boring 6.0'.			Soil gas sample collected.
			7				
			8				
			9				

Signature:

Firm: Grand Rapids  
2025 E. Beltline Ave. Ste 402 Grand Rapids616-975-5415  
Fax 616-975-1098

Checked By: JJD



SOIL BORING WELL CONSTRUCTION LOG 3-01-06.GPJ RMT CORP.GDT 4/10/06



## SOIL BORING LOG

BORING NO. SG-06-5

Page 1 of 1

Facility/Project Name: <b>L.E. Carpenter Soil Gas</b>		Date Drilling Started: <b>3/1/06</b>	Date Drilling Completed: <b>3/1/06</b>	Project Number: <b>6527.21</b>		
Drilling Firm: <b>Enviroprobe</b>	Drilling Method: <b>Macro Sample</b>	Surface Elev. (ft)	TOC Elevation (ft) <b>---</b>	Total Depth (ft bgs) <b>6.0</b>	Borehole Dia. (in) <b>2</b>	
Boring Location:		Personnel Logged By - E. Vincke Driller -		Drilling Equipment: <b>Geoprobe</b>		
Civil Town/City/or Village: <b>Wharton</b>	County: <b>Morris</b>	State: <b>New Jersey</b>	Water Level Observations: While Drilling:      Date/Time After Drilling:      Date/Time Depth (ft bgs) Depth (ft bgs)			
SAMPLE		LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
NUMBER AND TYPE	RECOVERY (%)					
 GP	83	1 2 3 4 5 6	Sand- mostly very fine sand, trace medium sand, loose, no odor, dry, very dark gray (7.5YR3/1).  Sand- mostly fine sand, little coarse sand, few cobbles, dry, no odor, nonplastic, dark brown (7.5YR3/2), timber present. Sand- mostly fine sand, little coarse sand, few cobbles, dry, loose, no odor, brown (7.5YR4/3).  End of boring 6.0'.	SP  SP  SP		0  0  0  Soil gas sample collected.
		7				
		8				
		9				

Signature:

Firm: Grand Rapids  
2025 E. Beltline Ave. Ste 402 Grand Rapids616-975-5415  
Fax 616-975-1098

Checked By: JJD

SOIL BORING WELL CONSTRUCTION LOG 3-01-08.GPJ RMT CORP.GDT 4/10/06









## SOIL BORING LOG

BORING NO. SG-06-6

Page 1 of 1

Facility/Project Name: <b>L.E. Carpenter Soil Gas</b>		Date Drilling Started: <b>3/1/06</b>	Date Drilling Completed: <b>3/1/06</b>	Project Number: <b>6527.21</b>	
Drilling Firm: <b>Enviroprobe</b>	Drilling Method: <b>Macro Sample</b>	Surface Elev. (ft)	TOC Elevation (ft) <b>---</b>	Total Depth (ft bgs) <b>6.5</b>	Borehole Dia. (in) <b>2</b>
Boring Location:		Personnel Logged By - E. Vincke Driller -		Drilling Equipment: <b>Geoprobe</b>	
Civil Town/City/or Village: <b>Wharton</b>	County: <b>Morris</b>	State: <b>New Jersey</b>		Water Level Observations: While Drilling:      Date/Time After Drilling:      Date/Time Depth (ft bgs) Depth (ft bgs)	

SAMPLE		DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
NUMBER AND TYPE	RECOVERY (%)						
	62		Topsoil				
		1	Sand- mostly fine sand, loose, dry, slight odor, brown (7.5YR4/4).	SP		5.7	
		2	Coal- shiny black (7.5YR2.5/1), medium to coarse grain, dry, loose, no odor.				
		3	Sand- mostly very fine sand, some silt, trace cobbles, nonplastic, no odor, dry, compact, dark brown (7.5YR3/2).	SP-SM		0	
		4					
		5				0	
		6	Silt- mostly silt, trace cobbles and gravel, dry, stiff, no odor, nonplastic, brown (7.5YR4/3).	ML			
		7	End of boring 6.5'.				Soil gas sample collected.
		8					
		9					

Signature:

Firm: Grand Rapids  
2025 E. Beltline Ave. Ste 402 Grand Rapids616-975-5415  
Fax 616-975-1098

Checked By: JJD







SOIL BORING WELL CONSTRUCTION LOG 3-01-06.GPJ RMT CORP.GDT 4/10/06



## SOIL BORING LOG

BORING NO. SG-06-7

Page 1 of 1

Facility/Project Name: <b>L.E. Carpenter Soil Gas</b>		Date Drilling Started: <b>3/1/06</b>	Date Drilling Completed: <b>3/1/06</b>	Project Number: <b>6527.21</b>		
Drilling Firm: <b>Enviroprobe</b>	Drilling Method: <b>Macro Sample</b>	Surface Elev. (ft)	TOC Elevation (ft) <b>—</b>	Total Depth (ft bgs) <b>6.0</b>	Borehole Dia. (in) <b>2</b>	
Boring Location:		Personnel Logged By - E. Vincke Driller -		Drilling Equipment: <b>Geoprobe</b>		
Civil Town/City/or Village: <b>Wharton</b>	County: <b>Morris</b>	State: <b>New Jersey</b>	Water Level Observations: While Drilling:      Date/Time After Drilling:      Date/Time Depth (ft bgs) Depth (ft bgs)			
SAMPLE		LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
NUMBER AND TYPE	RECOVERY (%)					
			1		0	Soil gas sample collected.
			2			
			3			
			4		0	
			5			
			6		2.9	
7						
8						
9	End of boring 6.0'.					

SOIL BORING WELL CONSTRUCTION LOG 3-01-06.GPJ RMT CORP.GDT 4/10/06

Signature:

Firm: Grand Rapids  
2025 E. Beltline Ave. Ste 402 Grand Rapids616-975-5415  
Fax 616-975-1098

Checked By: JJD

# Appendix C

## Soil Gas Sampling Field Data

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PROJECT NAME:	L. E. Carpenter
PROJECT NUMBER:	<del>6527.18</del> , 6527.21
PROJECT MANAGER:	N. Clevett
SITE LOCATION:	Wharton, NJ
DATES OF FIELDWORK:	2/27/2006 TO <del>3/2</del> /2006
PURPOSE OF FIELDWORK:	Collect Static Water Levels, Ground and Surface Water Sample
WORK PERFORMED BY:	E. Vincke

E. Vincke 3/3/06  
SIGNED DATE

D. Vincke 3/7/06  
CHECKED BY DATE





## GENERAL NOTES

PROJECT NAME: L. E. Carpenter	DATE: 3/1/06	TIME ARRIVED: 0730
PROJECT NUMBER: 6527.78 21	AUTHOR: E. Vincke	TIME LEFT: 1615

WEATHER		
TEMPERATURE: 25 - 38 °F	WIND: 5-15 MPH	VISIBILITY: CLR
WORK / SAMPLING PERFORMED		
0800 Drillers arrive on site, setup		
0835 Begin drilling & sampling		
1205 Break for lunch, samples collected SG-06-4, 5, 6, 7		
1230 Resume Drilling, samples collected SG-06-1, 2, 3		
Tried 2 attempts inside building.		
1530 Drillers leave site, cuttings were drummed.		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME		
J. Overmorde	} RMT, Inc.	drilling updates, troubleshooting
N. Cleveatt		
J. Dexter		

<u>E. Vincke</u>	<u>3/1/06</u>	<u>J. Overmorde</u>	<u>3/2/06</u>
SIGNED	DATE	CHECKED BY	DATE



## PID FIELD CALIBRATION LOG

PROJECT NAME:	L. E. Carpenter	MODEL:	Mini RAE 2000
PROJECT NUMBER:	6527.1821	LAMP VOLTAGE:	10.6
SAMPLER NAME:	E. Vincke	SERIAL NO.:	Field Environmental

## PID CALIBRATION CHECK

	DATE: 3/1/06 TIME: 0845 INITIALS: EV	DATE: TIME: INITIALS:	DATE: TIME: INITIALS:	DATE: TIME: INITIALS:	DATE: TIME: INITIALS:
BATTERY CHECK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ZERO GAS	/ 0	/	/	/	/
SPAN GAS	/ 100	/	/	/	/
AUDIBLE FAN MOTOR CHECK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RESPONSE CHECK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## PROBLEMS ENCOUNTERED

NA

### CORRECTIVE ACTION

~~N/A~~

**SIGNED**

DATE \_\_\_\_\_

**CHECKED**

DATE \_\_\_\_\_

# METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

## A. GENERAL INFORMATION

Site Location: Nhantun, NJ  
 Site Address: 170 N. Main St  
 Field ID No: 56-06-1 Size of Canister: 1 L  
 Sampling Date(s): 3/1/06 Canister Serial No: 33713  
 Shipping Date: 3/1/06 Flow Controller No: FC00150

## B. SAMPLING INFORMATION

### TEMPERATURE (Fahrenheit)

	Interior	Ambient	Maximum	Minimum
Start		39		
Stop		39		

### PRESSURE (inches of Hg)

	Ambient	Maximum	Minimum
Start	29.90		
Stop	29.90		

### CANISTER PRESSURE (inches of Hg) FROM GAUGE

Start	-27	
Stop	-5	

### SAMPLING TIMES (24 hour clock)

	Local Times	Elapsed Time Meter Reading
Start	1313 06	
Stop	1318 39	

*E. Vukich* / Environmental Scientist  
 Signature/Title of Investigator

## C. LABORATORY INFORMATION

### FLOW RATES (ml/min)

	Flow Controller Readout	
Shipping out from Lab		required (from lab record log) after return
Receiving in Lab		(if applicable)

### CANISTER PRESSURE

	Inches of Hg	
Initial Pressure (to field)		required (from lab record log) after return
Final Pressure (from field)		required (from lab record log) after return

Data Shipped: \_\_\_\_\_

Date Received: \_\_\_\_\_

Individual Canister Certification (provide File #): \_\_\_\_\_

Batch Certification (provide Batch ID#): \_\_\_\_\_

\_\_\_\_\_  
 Signature/Title  
 GC/MS Analyst for TO-15

**RMT****LOG OF SOIL BORING**

PROJECT NAME: L. E. Carpenter		SOIL BORING ID: 56-06-1	
PROJECT NUMBER: 6527.18 21		NORTHING:	SHEET 1 OF
LOGGED BY: E. Vincke		EASTING:	SURFACE ELEV.:
PROJECT LOCATION: Wharton, NJ		DATE STARTED: 3/1/06	
DRILLED BY: Enviroprobe		DRILLER NAME:	DATE COMPLETED: 3/1/06

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	50 70	NA	0 0 0	2.5 5 7.5 10 12.5 15 17.5 20	<p>(SN) Mostly F Sand, Few C Sand, Trace M Sand, Trace Subangular gravels, loose, no odor, dry, very drk gray (7.5 YR 3/1)</p> <p>(SP-SM) Mostly F Sand, little silt, trace gravel, moist, no odor, compact, drk brn (7.5 YR 3/2).</p> <p>(SP) Mostly F Sand, Moist, loose, no odor, trace cobbles, brn (7.5 YR 4/3)</p> <p>EOB 6.0'</p> <p>Sample Collected 6.0'</p> <p>Refusal Attempts - 6</p> <p>1.5', 1.0', 1.5', 1', 3.5', 2.0'</p>	wood

DRILLING METHOD	Macro Sample
DRILL RIG	Geoprobe
BORING DIAMETER	2.0"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:			
DATE	TIME	DEPTH TO WATER	DEPTH TO CAVE-IN

E. Vincke 3/1/06  
SIGNED DATE

D. Remonde 3/7/06  
CHECKED DATE

## METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

## A. GENERAL INFORMATION

Site Location: Wharton, NJ  
 Site Address: 170 N. Main St  
 Field ID No: 56-06-2 Size of Canister: 1L  
 Sampling Date(s): 3/1/06 Canister Serial No: 30185  
 Shipping Date: 3/1/06 Flow Controller No: FC 00417

## B. SAMPLING INFORMATION

## TEMPERATURE (Fahrenheit)

	Interior	Ambient	Maximum	Minimum
Start		41		
Stop		41		

## PRESSURE (inches of Hg)

	Ambient	Maximum	Minimum
Start	29.88		
Stop	29.88		

## CANISTER PRESSURE (inches of Hg) FROM GAUGE

Start	-26.5	
Stop	-5	

## SAMPLING TIMES (24 hour clock)

	Local Times	Elapsed Time Meter Reading
Start	1452 19	
Stop	1457 54	

Eric Vincke Environmental Scientist  
 Signature/Title of Investigator

## C. LABORATORY INFORMATION

## FLOW RATES (ml/min)

	Flow Controller Readout	
Shipping out from Lab		required (from lab record log) after return
Receiving in Lab		(if applicable)

## CANISTER PRESSURE

	Inches of Hg	
Initial Pressure (to field)		required (from lab record log) after return
Final Pressure (from field)		required (from lab record log) after return

Data Shipped: \_\_\_\_\_

Date Received: \_\_\_\_\_

Individual Canister Certification (provide File #): \_\_\_\_\_

Batch Certification (provide Batch ID#): \_\_\_\_\_

\_\_\_\_\_  
 Signature/Title  
 GC/MS Analyst for TO-15



## LOG OF SOIL BORING

PROJECT NAME: L. E. Carpenter		SOIL BORING ID: SG-06-2	
PROJECT NUMBER: 6527.18 21		NORTHING:	SHEET 1 OF
LOGGED BY: E. Vincke		EASTING:	SURFACE ELEV.:
PROJECT LOCATION: Wharton, NJ		DATE STARTED: 3/1/06	
DRILLED BY: Enviroprobe	DRILLER NAME:	DATE COMPLETED: 3/1/06	

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	48	72	NA	0	(SW) Mostly VF Sand, Few C Sand, Trace M Sand, Trace subangular gravel, loose, no odor, dry, very drk gray (7.5 YR 3/1)	
					2.5	(SP-SM) Mostly F Sand, little Silt, trace gravel, moist, no odor, compact, drk brn (7.5 YR 3/2).	
					5	(SP) Mostly F Sand, Moist, loose, no odor, brn (7.5 YR 4/3), little cobbles.	
						EDB 6.0'	
					7.5	Refusal 6 attempts	
						2.5', 2.0', 3.0', 3.25', 3.0', 2.0', 2.5', 3.0'	
					10		
						Sample @ 6.0'	
					12.5		
					15		
					17.5		
					20		

DRILLING METHOD	Macro Sample
DRILL RIG	Geoprobe
BORING DIAMETER	2.0"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:			
DATE	TIME	DEPTH TO WATER	DEPTH TO CAVE-IN

SIGNED E. Vincke DATE 3/1/06

CHECKED D. Remonde DATE 3/7/06

# METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

## A. GENERAL INFORMATION

Site Location: Wharton, NJ  
 Site Address: 170 N. Main St.  
 Field ID No: 56-06-3 Size of Canister: 1 L  
 Sampling Date(s): 3/1/06 Canister Serial No: 12035  
 Shipping Date: 3/1/06 Flow Controller No: FC00634

## B. SAMPLING INFORMATION

### TEMPERATURE (Fahrenheit)

	Interior	Ambient	Maximum	Minimum
Start		39		
Stop		39		

### PRESSURE (inches of Hg)

	Ambient	Maximum	Minimum
Start	29.90		
Stop	29.90		

### CANISTER PRESSURE (inches of Hg) FROM GAUGE

Start	-27.5	
Stop	-5	

### SAMPLING TIMES (24 hour clock)

	Local Times	Elapsed Time Meter Reading
Start	1342 23	
Stop	1347 39	

*E. Vich* / Environmental Scientist  
 Signature/Title of Investigator

## C. LABORATORY INFORMATION

### FLOW RATES (ml/min)

	Flow Controller Readout	
Shipping out from Lab		required (from lab record log) after return
Receiving in Lab		(if applicable)

### CANISTER PRESSURE

	Inches of Hg	
Initial Pressure (to field)		required (from lab record log) after return
Final Pressure (from field)		required (from lab record log) after return

Data Shipped: \_\_\_\_\_  
 Date Received: \_\_\_\_\_  
 Individual Canister Certification (provide File #): \_\_\_\_\_  
 Batch Certification (provide Batch ID#): \_\_\_\_\_

\_\_\_\_\_  
 Signature/Title  
 GC/MS Analyst for TO-15

**RMT****LOG OF SOIL BORING**

PROJECT NAME: L. E. Carpenter	SOIL BORING ID: SG-06-03	
PROJECT NUMBER: 6527.18 21	NORTHING:	SHEET 1 OF
LOGGED BY: E. Vincke	EASTING:	SURFACE ELEV.:
PROJECT LOCATION: Wharton, NJ	DATE STARTED: 3/1/06	
DRILLED BY: Enviroprobe	DRILLER NAME:	DATE COMPLETED: 3/1/06

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	44/72	NA	0		(SP) Mostly, VF Sand, trace M Sand, loose, no odor, wet (snow), very drk gray, (7.5 YR 3/1)	
				0	2.5	(SP) Mostly F Sand, loose, no odor, dry, strong brn (7.5 YR 4/6).	
				0	4.5	(ML) Mostly silt, soft, no odor, dry, non plastic, drk brn (7.5 YR 3/2).	
					5	(SP) Mostly F Sand, little C Sand, few cobbles, dry, slight odor, loose, brn (7.5 YR 4/3).	
					7.5	EOB 6.0'	
					7.5	Sample @ 6.0'	
					10	Refusal Attempts	
					12.5	2.0', 2.5', 4.0', 3.8'	
					15	Mist silty clay in tip	
					17.5		
					20		

DRILLING METHOD Macro
DRILL RIG Geoprobe
BORING DIAMETER 2.0"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:			
DATE	TIME	DEPTH TO WATER	DEPTH TO CAVE-IN

E. Vincke 3/1/06  
SIGNED DATE

Enviroprobe 3/7/06  
CHECKED DATE



# METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

## A. GENERAL INFORMATION

Site Location: Wharton, NJ  
 Site Address: 170 N. Main St.  
 Field ID No: 56-06-4 Size of Canister: 1L  
 Sampling Date(s): 3/1/06 Canister Serial No: 23831  
 Shipping Date: 3/1/06 Flow Controller No: FC00661

## B. SAMPLING INFORMATION

### TEMPERATURE (Fahrenheit)

	Interior	Ambient	Maximum	Minimum
Start		34		
Stop		34		

### PRESSURE (inches of Hg)

	Ambient	Maximum	Minimum
Start	29.94		
Stop			

### CANISTER PRESSURE (inches of Hg) FROM GAUGE

Start	-26	
Stop	-5	

### SAMPLING TIMES (24 hour clock)

	Local Times	Elapsed Time Meter Reading
Start	1008.31	
Stop	1013.26	

E. Vaich / Environmental Scientist  
 Signature/Title of Investigator

## C. LABORATORY INFORMATION

### FLOW RATES (ml/min)

	Flow Controller Readout	
Shipping out from Lab	-167	required (from lab record log) after return
Receiving in Lab		(if applicable)

### CANISTER PRESSURE

	Inches of Hg	
Initial Pressure (to field)	-26	required (from lab record log) after return
Final Pressure (from field)	-5	required (from lab record log) after return

Data Shipped: 3/1/06

Date Received: \_\_\_\_\_

Individual Canister Certification (provide File #): \_\_\_\_\_

Batch Certification (provide Batch ID#): \_\_\_\_\_

\_\_\_\_\_  
 Signature/Title  
 GC/MS Analyst for TO-15



## LOG OF SOIL BORING

PROJECT NAME: L. E. Carpenter		SOIL BORING ID: 36-06-04	
PROJECT NUMBER: 6527.18/21		NORTHING:	SHEET 1 OF
LOGGED BY: E. Vincke		EASTING:	SURFACE ELEV.:
PROJECT LOCATION: Wharton, NJ		DATE STARTED: 3/1/06	
DRILLED BY: Enviroprobe		DRILLER NAME:	DATE COMPLETED: 3/1/06

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
						(SP) Mostly VF Sand, trace M Sand, loose, no odor, dry, very drk gray (7.5 YR 3/1)	
						(SP) Mostly F Sand, loose, no odor, dry, strong brn (7.5 YR 4/6)	
1	DP	40/72	NA	0	2.5	(SP) Mostly <del>Silt</del> VF Sand, trace F Sand, dry, loose, no odor, v drk gray (7.5 YR 3/1)	
				0	5	(SP) Mostly F Sand, little C Sand, few cobbles, dry, no odor, loose, brn (7.5 YR 4/3).	
					7.5	EOB 6.0'	
						Sample @ 6.0'	
					10		
					12.5		
					15		
					17.5		
					20		

DRILLING METHOD Macro
DRILL RIG Geoprobe
BORING DIAMETER 2.0"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:			
DATE	TIME	DEPTH TO WATER	DEPTH TO CAVE-IN

SIGNED E. Vincke DATE 3/1/06

CHECKED D. Remonde DATE 3/7/06

# METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

## A. GENERAL INFORMATION

Site Location: Wharton, NJ  
Site Address: 170 N. Main St.  
Field ID No: 36-06-5 Size of Canister: 1L  
Sampling Date(s): 3/1/06 Canister Serial No: 25281  
Shipping Date: 3/1/06 Flow Controller No: FC00895

## B. SAMPLING INFORMATION

TEMPERATURE (Fahrenheit)			
	Interior	Ambient	Maximum
Start		36	
Stop		36	

PRESSURE (inches of Hg)		
	Ambient	Maximum
Start	29.94	
Stop	29.94	

CANISTER PRESSURE (inches of Hg) FROM GAUGE	
Start	-57
Stop	-5

SAMPLING TIMES (24 hour clock)	
	Local Times
Start	1105 30
Stop	1110 44

C. Vink Environmental Scientist  
Signature/Title of Investigator

## C. LABORATORY INFORMATION

FLOW RATES (ml/min)	
	Flow Controller Readout
Shipping out from Lab	required (from lab record log) after return
Receiving in Lab	(if applicable)

CANISTER PRESSURE	
	Inches of Hg
Initial Pressure (to field)	-27
Final Pressure (from field)	

Data Shipped: 3/1/06

Date Received: \_\_\_\_\_

Individual Canister Certification (provide File #): \_\_\_\_\_

Batch Certification (provide Batch ID#): \_\_\_\_\_

\_\_\_\_\_  
Signature/Title  
GC/MS Analyst for TO-15

**RMT****LOG OF SOIL BORING**

PROJECT NAME: L. E. Carpenter		SOIL BORING ID: SG-06-5	
PROJECT NUMBER: 6527-21		NORTHING:	SHEET 1 OF
LOGGED BY: E. Vincke		EASTING:	SURFACE ELEV.:
PROJECT LOCATION: Wharton, NJ		DATE STARTED: 3/1/06	
DRILLED BY: Enviroprobe	DRILLER NAME:		DATE COMPLETED: 3/1/06

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	45 72	NA	0	2.5'	(SP) Mostly VF Sand, trace M Sand, loose, no odor, dry, & drk gray (7.5 YR 3/1)	
				0	2.5'	(SP) Mostly F Sand, little C Sand, two cobbles, dry, no odor, <del>non</del> plastic, drk brn (7.5 YR 3/2), wood	
				0	5'	(SP) Mostly F Sand, little C Sand, two cobbles, dry, <del>loose</del> loose, no odor, brn (7.5 YR 4/3)	
						EOB 6.0'	
					7.5'	Sample 6.0'	
					10'		
					12.5'		
					15'	Refusal Attempts	
						3.5', 2.0', 4.5', 4.5'	
					17.5'		
					20'		

DRILLING METHOD Macro
DRILL RIG Geoprobe
BORING DIAMETER 2.0"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:			
DATE	TIME	DEPTH TO WATER	DEPTH TO CAVE-IN

E. Vinck 3/1/06  
SIGNED DATE

Overmoore 3/7/06  
CHECKED DATE

## METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

## A. GENERAL INFORMATION

Site Location: Wharton, NS  
 Site Address: 170 N. Wharton  
 Field ID No: 56-06-6 Size of Canister: 1L  
 Sampling Date(s): 3/1/06 Canister Serial No: 21028  
 Shipping Date: 3/1/06 Flow Controller No: FC00148

## B. SAMPLING INFORMATION

## TEMPERATURE (Fahrenheit)

	Interior	Ambient	Maximum	Minimum
Start		36		
Stop		36		

## PRESSURE (inches of Hg)

	Ambient	Maximum	Minimum
Start	29.94		
Stop	29.94		

## CANISTER PRESSURE (inches of Hg) FROM GAUGE

Start	-26.5	
Stop	-5	

## SAMPLING TIMES (24 hour clock)

	Local Times	Elapsed Time Meter Reading
Start	1129 49	
Stop	1134 58	

Eric Vincke Environmental Scientist  
 Signature/Title of Investigator

## C. LABORATORY INFORMATION

## FLOW RATES (ml/min)

	Flow Controller Readout	
Shipping out from Lab		required (from lab record log) after return
Receiving in Lab		(if applicable)

## CANISTER PRESSURE

	Inches of Hg	
Initial Pressure (to field)		required (from lab record log) after return
Final Pressure (from field)		required (from lab record log) after return

Data Shipped: \_\_\_\_\_

Date Received: \_\_\_\_\_

Individual Canister Certification (provide File #): \_\_\_\_\_

Batch Certification (provide Batch ID#): \_\_\_\_\_

\_\_\_\_\_  
 Signature/Title  
 GC/MS Analyst for TO-15



## LOG OF SOIL BORING

PROJECT NAME: L. E. Carpenter	SOIL BORING ID: 56-06-6	
PROJECT NUMBER: 6527.18 21	NORTHING:	SHEET 1 OF
LOGGED BY: E. Vincke	EASTING:	SURFACE ELEV.:
PROJECT LOCATION: Wharton, NJ		DATE STARTED: 3/1/06
DRILLED BY: Enviroprobe	DRILLER NAME:	DATE COMPLETED: 3/1/06

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	48/72	NA	5.7	2.5	Top Soil (SP) Mostly F Sand, loose, dry, slight odor, brn (7.5 YR 4/4).	
				0		Fine dry Sand Shiny blk (7.5 YR 2.5/1), M-C grain, dry, loose, no odor.	
				0	5	(SP-SM) Mostly VF Sand, Some Silt, non plastic, no odor, dry, compact, trace cobbles, drk brn (7.5 YR 3/2).	
					7.5	(ML) Mostly Silt, Trace cobble & gravel, dry, stiff, no odor, brn (7.5 YR 4/3), non plastic.	
						EOB 6.5'	
						Sample @ 6.5'	
					10		
					12.5		
					15		
					17.5		
					20		

DRILLING METHOD Macro
DRILL RIG Geoprobe
BORING DIAMETER 2.0"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:			
DATE	TIME	DEPTH TO WATER	DEPTH TO CAVE-IN

SIGNED E. Vincke DATE 3/1/06

CHECKED D. Remonde DATE 3/7/06

## METHOD TO-15 CANISTER SAMPLING FIELD TEST DATA SHEET

## A. GENERAL INFORMATION

Site Location: Wharton, NJ  
 Site Address: 170 N Main St.  
 Field ID No: SG-06-7 Size of Canister: 1L  
 Sampling Date(s): 3/1/06 Canister Serial No: 23829  
 Shipping Date: 3/1/06 Flow Controller No: FC00797

## B. SAMPLING INFORMATION

## TEMPERATURE (Fahrenheit)

	Interior	Ambient	Maximum	Minimum
Start		<u>36</u>		
Stop		<u>36</u>		

## PRESSURE (inches of Hg)

	Ambient	Maximum	Minimum
Start	<u>29.94</u>		
Stop	<u>29.94</u>		

## CANISTER PRESSURE (inches of Hg) FROM GAUGE

Start	<u>H -26.5</u>
Stop	<u>-5</u>

## SAMPLING TIMES (24 hour clock)

	Local Times	Elapsed Time Meter Reading
Start	<u>1151 42</u>	
Stop	<u>1156 39</u>	

Ei Visk | Environmental Scientist  
 Signature/Title of Investigator

## C. LABORATORY INFORMATION

## FLOW RATES (ml/min)

	Flow Controller Readout	
Shipping out from Lab		required (from lab record log) after return
Receiving in Lab		(if applicable)

## CANISTER PRESSURE

	Inches of Hg	
Initial Pressure (to field)		required (from lab record log) after return
Final Pressure (from field)		required (from lab record log) after return

Data Shipped: \_\_\_\_\_

Date Received: \_\_\_\_\_

Individual Canister Certification (provide File #): \_\_\_\_\_

Batch Certification (provide Batch ID#): \_\_\_\_\_

\_\_\_\_\_  
 Signature/Title  
 GC/MS Analyst for TO-15



## LOG OF SOIL BORING

PROJECT NAME: L. E. Carpenter	SOIL BORING ID: 56-06-7	
PROJECT NUMBER: 6527.18'2)	NORTHING:	SHEET 1 OF
LOGGED BY: E. Vincke	EASTING:	SURFACE ELEV.:
PROJECT LOCATION: Wharton, NJ	DATE STARTED: 3/1/06	
DRILLED BY: Enviroprobe	DRILLER NAME:	DATE COMPLETED: 3/1/06

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	46/72	NA	0	2.5	(SP) Mostly Fine Sand, little C Sand, few cobbles, <del>dry</del> dry no odor, drk brn (7.5 YR 3/2).	
				0	2.9	(SP-SM) Mostly VF Sand, some silt, little cobbles nonplastic, no odor, dry, compact, drk brn (7.5 YR 3/2)	
					5	(ML) Mostly Silt, Trace cobble, gravel, & VF Sand, dry, stiff, slight odor, brn (7.5 YR 4/3), nonplastic.	
					7.5	6.0 EOB	
					10	6.0 sample taken	
					12.5		
					15		
					17.5		
					20		

DRILLING METHOD Macro
DRILL RIG Geoprobe
BORING DIAMETER 2.0"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:			
DATE	TIME	DEPTH TO WATER	DEPTH TO CAVE-IN

SIGNED E. Vincke DATE 3/1/06

CHECKED Enviroprobe DATE 3/1/06



**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

**180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020**

Page \_\_\_\_ of \_\_\_\_

**CHAIN-OF-CUSTODY RECORD**

Contact Person: Nicholas Clevert  
Company: RMT Inc Email: jeanifer.overlander@rmtinc.com  
Address: 2000 E. Bellline Ave City: Grand Rapids State: MI Zip: 49546  
Phone: 616-975-5415 Fax: 616-975-1098  
Collected by: (Signature) [Signature]

<b>Project Info:</b>		<b>Turn Around Time:</b>	<b>Lab Use Only</b>
P.O. # <u>6527.21</u>		<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush specify _____	Pressurized by: _____
Project # <u>6527.21</u>			Date: _____
Project Name <u>L.E.C.</u>			Pressurization Gas: <u>N<sub>2</sub></u> <u>He</u>

Lab I.D.	Field Sample I.D. (Location)	Can#	Date	Time	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
	SG-06-4		3/1/06	1008	TD-15	-26	-5		
	SG-06-5		3/1/06	1105	TD-15	-27	-5		
	SG-06-6		3/1/06	1129	TD-15	-26.5	-5		
	SG-06-7		3/1/06	1151	TD-15	-26.5	-5		
	SG-06-1		3/1/06	1313	TD-15	-27	-5		
	SG-06-3		3/1/06	1342	TD-15	-27.5	-5		
	SG-06-2		3/1/06	1452	TD-15	-26.5	-5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>3/1/06 1650</u>		Received by: (signature) <u>Fed Ex</u> Date/Time _____		<b>Notes:</b>		
Relinquished by: (signature) _____ Date/Time _____		Received by: (signature) _____ Date/Time _____				
Relinquished by: (signature) _____ Date/Time _____		Received by: (signature) _____ Date/Time _____				
<b>Lab Use Only</b>	Shipper Name	Air Bill #	Temp (°C)	Condition	Customer Seals Intact?	Work Order #
					Yes No None	

# Appendix D

## Soil Gas Laboratory Analytical Report



# AIR TOXICS LTD.

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**WORK ORDER #: 0603056**

## Work Order Summary

<b>CLIENT:</b>	Mr. Eric Vincke RMT, Inc. 2025 E. Beltline Avenue, SE Suite 402 Grand Rapids, MI 49546	<b>BILL TO:</b>	Accounts Payable RMT, Inc. P.O. Box 8923 Madison, WI 53708-8923
<b>PHONE:</b>	616-975-5415	<b>P.O. #</b>	6527.21
<b>FAX:</b>	616-975-1098	<b>PROJECT #</b>	6527.21 L.E.C.
<b>DATE RECEIVED:</b>	03/02/2006	<b>CONTACT:</b>	Susan Alaniz
<b>DATE COMPLETED:</b>	03/14/2006		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	SG-06-4	Modified TO-15	5.0 "Hg
02A	SG-06-5	Modified TO-15	5.5 "Hg
03A	SG-06-6	Modified TO-15	5.0 "Hg
04A	SG-06-7	Modified TO-15	5.0 "Hg
05A	SG-06-1	Modified TO-15	5.0 "Hg
05AA	SG-06-1 Duplicate	Modified TO-15	5.0 "Hg
06A	SG-06-3	Modified TO-15	5.0 "Hg
07A	SG-06-2	Modified TO-15	4.5 "Hg
08A	Lab Blank	Modified TO-15	NA
09A	CCV	Modified TO-15	NA
10A	LCS	Modified TO-15	NA

CERTIFIED BY:

*Linda D. Fumman*

Laboratory Director

DATE: 03/15/06

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15**  
**RMT, Inc.**  
**Workorder# 0603056**

Seven 1 Liter Summa Canister samples were received on March 02, 2006. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

<i><b>Requirement</b></i>	<i><b>TO-15</b></i>	<i><b>ATL Modifications</b></i>
Daily CCV	+/- 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

The reported LCS for each daily batch has been derived from more than one analytical file.

The reported result for 4-Ethyltoluene in samples SG-06-5, SG-06-1, SG-06-1 Duplicate and SG-06-2 may be biased high due to co-elution with a non target compound with similar characteristic ions. Both the primary and secondary ion for 4-Ethyltoluene exhibited potential interference.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.



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- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



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## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-06-4

Lab ID#: 0603056-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	1.2	33	2.7	73
Ethanol	4.8	6.2	9.1	12
Acetone	4.8	150	11	350
Carbon Disulfide	1.2	1.5	3.8	4.6
Methyl tert-butyl ether	1.2	7.1	4.4	26
Hexane	1.2	20	4.3	71
2-Butanone (Methyl Ethyl Ketone)	1.2	6.6	3.6	19
Cyclohexane	1.2	3.2	4.2	11
2,2,4-Trimethylpentane	1.2	440	5.6	2100
Benzene	1.2	10	3.9	34
Heptane	1.2	8.6	5.0	35
Toluene	1.2	20	4.6	75
Ethyl Benzene	1.2	2.5	5.2	11
m,p-Xylene	1.2	6.7	5.2	29
o-Xylene	1.2	2.4	5.2	10

Client Sample ID: SG-06-5

Lab ID#: 0603056-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	1.2	98	2.7	220
Ethanol	4.9	14	9.3	27
Acetone	4.9	370	12	890
2-Propanol	4.9	5.5	12	14
Carbon Disulfide	1.2	15	3.8	48
Methyl tert-butyl ether	1.2	7.6	4.4	28
Hexane	1.2	8.7	4.4	31
2-Butanone (Methyl Ethyl Ketone)	1.2	21	3.6	63
Cyclohexane	1.2	2.0	4.2	7.0
2,2,4-Trimethylpentane	1.2	490 E	5.8	2300 E
Benzene	1.2	15	3.9	48
Heptane	1.2	8.3	5.1	34
Toluene	1.2	22	4.6	82
Ethyl Benzene	1.2	2.8	5.4	12
m,p-Xylene	1.2	8.5	5.4	37
o-Xylene	1.2	2.4	5.4	10
4-Ethyltoluene	1.2	2.0	6.1	9.7



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## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-06-5

Lab ID#: 0603056-02A

1,2,4-Trimethylbenzene	1.2	2.7	6.1	13
1,2,4-Trichlorobenzene	4.9	5.7 J	37	42 J

Client Sample ID: SG-06-6

Lab ID#: 0603056-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	1.2	2.1	3.1	5.3
1,3-Butadiene	1.2	51	2.7	110
Ethanol	4.8	10	9.1	19
Acetone	4.8	250	11	590
Carbon Disulfide	1.2	6.4	3.8	20
Methyl tert-butyl ether	1.2	2.6	4.4	9.2
Hexane	1.2	12	4.3	44
2-Butanone (Methyl Ethyl Ketone)	1.2	6.9	3.6	20
Cyclohexane	1.2	2.5	4.2	8.6
2,2,4-Trimethylpentane	1.2	750 E	5.6	3500 E
Benzene	1.2	7.2	3.9	23
Heptane	1.2	5.9	5.0	24
Toluene	1.2	14	4.6	55
Ethyl Benzene	1.2	2.1	5.2	9.3
m,p-Xylene	1.2	5.9	5.2	26
o-Xylene	1.2	2.1	5.2	9.2
1,2,4-Trimethylbenzene	1.2	2.0	5.9	9.6

Client Sample ID: SG-06-7

Lab ID#: 0603056-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloromethane	12	27	25	56
1,3-Butadiene	3.0	36	6.7	80
Ethanol	12	13	23	24
Acetone	12	200	29	480
Methyl tert-butyl ether	3.0	5.0	11	18
Hexane	3.0	8.1	11	28
2-Butanone (Methyl Ethyl Ketone)	3.0	5.7	8.9	17
2,2,4-Trimethylpentane	3.0	580	14	2700
Benzene	3.0	9.4	9.7	30



# AIR TOXICS LTD.

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## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-06-7

Lab ID#: 0603056-04A

Heptane	3.0	6.1	12	25
Toluene	3.0	15	11	55
m,p-Xylene	3.0	4.1	13	18

Client Sample ID: SG-06-1

Lab ID#: 0603056-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	1.2	1.5	3.1	4.0
1,3-Butadiene	1.2	56	2.7	120
Ethanol	4.8	39	9.1	74
Acetone	4.8	480	11	1100
2-Propanol	4.8	5.3	12	13
Carbon Disulfide	1.2	3.3	3.8	10
Methyl tert-butyl ether	1.2	4.9	4.4	18
Hexane	1.2	23	4.3	81
2-Butanone (Methyl Ethyl Ketone)	1.2	39	3.6	120
1,1,1-Trichloroethane	1.2	1.4	6.6	7.4
Cyclohexane	1.2	2.9	4.2	10
2,2,4-Trimethylpentane	1.2	510 E	5.6	2400 E
Benzene	1.2	10	3.9	34
Heptane	1.2	6.5	5.0	26
Toluene	1.2	19	4.6	72
Ethyl Benzene	1.2	2.9	5.2	13
m,p-Xylene	1.2	8.8	5.2	38
o-Xylene	1.2	3.1	5.2	14
4-Ethyltoluene	1.2	1.9	5.9	9.4
1,3,5-Trimethylbenzene	1.2	1.2	5.9	6.0
1,2,4-Trimethylbenzene	1.2	3.5	5.9	17

Client Sample ID: SG-06-1 Duplicate

Lab ID#: 0603056-05AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	1.2	1.4	3.1	3.6
1,3-Butadiene	1.2	53	2.7	120
Ethanol	4.8	39	9.1	73
Acetone	4.8	450	11	1100





# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-06-1 Duplicate

Lab ID#: 0603056-05AA

Carbon Disulfide	1.2	3.2	3.8	10
Methyl tert-butyl ether	1.2	4.1	4.4	15
Hexane	1.2	20	4.3	70
2-Butanone (Methyl Ethyl Ketone)	1.2	39	3.6	110
1,1,1-Trichloroethane	1.2	1.2	6.6	6.8
Cyclohexane	1.2	3.0	4.2	10
2,2,4-Trimethylpentane	1.2	490 E	5.6	2300 E
Benzene	1.2	11	3.9	34
Heptane	1.2	6.2	5.0	25
Toluene	1.2	19	4.6	71
Ethyl Benzene	1.2	3.0	5.2	13
m,p-Xylene	1.2	9.3	5.2	40
o-Xylene	1.2	2.9	5.2	12
4-Ethyltoluene	1.2	1.9	5.9	9.2
1,3,5-Trimethylbenzene	1.2	1.3	5.9	6.2
1,2,4-Trimethylbenzene	1.2	3.1	5.9	15

Client Sample ID: SG-06-3

Lab ID#: 0603056-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	2.4	9.2	5.4	20
Ethanol	9.7	30	18	57
Acetone	9.7	360	23	850
Carbon Disulfide	2.4	8.3	7.5	26
Hexane	2.4	3.3	8.5	12
2-Butanone (Methyl Ethyl Ketone)	2.4	15	7.1	44
2,2,4-Trimethylpentane	2.4	720	11	3400
Benzene	2.4	4.9	7.7	16
Heptane	2.4	5.8	9.9	24
Toluene	2.4	13	9.1	49
Ethyl Benzene	2.4	2.6	10	11
m,p-Xylene	2.4	8.0	10	35
o-Xylene	2.4	2.6	10	11
1,2,4-Trimethylbenzene	2.4	2.8	12	14

Client Sample ID: SG-06-2

Lab ID#: 0603056-07A



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-06-2

Lab ID#: 0603056-07A

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	1.2	2.0	2.6	4.5
Ethanol	4.8	11	9.0	20
Acetone	4.8	96	11	230
Carbon Disulfide	1.2	1.4	3.7	4.3
Methyl tert-butyl ether	1.2	1.5	4.3	5.4
2-Butanone (Methyl Ethyl Ketone)	1.2	4.8	3.5	14
1,1,1-Trichloroethane	1.2	8.0	6.5	44
2,2,4-Trimethylpentane	1.2	200	5.6	950
Benzene	1.2	1.8	3.8	5.9
Heptane	1.2	2.3	4.9	9.3
Toluene	1.2	8.4	4.5	31
Ethyl Benzene	1.2	1.9	5.2	8.1
m,p-Xylene	1.2	5.6	5.2	24
o-Xylene	1.2	2.0	5.2	8.6
4-Ethyltoluene	1.2	1.2	5.8	6.1
1,2,4-Trimethylbenzene	1.2	2.2	5.8	11



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-4

Lab ID#: 0603056-01A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030915	Date of Collection:	3/1/06
Dil. Factor:	2.42	Date of Analysis:	3/9/06 08:56 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	4.8	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	33	2.7	73
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.8	6.2	9.1	12
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	4.8	150	11	350
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	1.5	3.8	4.6
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.2	7.1	4.4	26
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	20	4.3	71
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	6.6	3.6	19
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Cyclohexane	1.2	3.2	4.2	11
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	440	5.6	2100
Benzene	1.2	10	3.9	34
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	8.6	5.0	35
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	20	4.6	75
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-4

Lab ID#: 0603056-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030915	Date of Collection:	3/1/06
Dil. Factor:	2.42	Date of Analysis:	3/9/06 08:56 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
2-Hexanone	4.8	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	2.5	5.2	11
m,p-Xylene	1.2	6.7	5.2	29
o-Xylene	1.2	2.4	5.2	10
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.9	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected U J	36	Not Detected U J
Hexachlorobutadiene	4.8	Not Detected	52	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	94	70-130



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-5

Lab ID#: 0603056-02A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030907	Date of Collection:	3/1/06
Dil Factor:	2.47	Date of Analysis:	3/9/06 02:53 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	98	2.7	220
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	14	9.3	27
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	370	12	890
2-Propanol	4.9	5.5	12	14
Carbon Disulfide	1.2	15	3.8	48
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	7.6	4.4	28
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	8.7	4.4	31
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	21	3.6	63
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	2.0	4.2	7.0
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	490 E	5.8	2300 E
Benzene	1.2	15	3.9	48
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	8.3	5.1	34
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	22	4.6	82
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-5

Lab ID#: 0603056-02A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030907	Date of Collection:	3/1/06
Dil. Factor:	2.47	Date of Analysis:	3/9/06 02:53 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.2	Not Detected	8.4	Not Detected
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.5	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	2.8	5.4	12
m,p-Xylene	1.2	8.5	5.4	37
o-Xylene	1.2	2.4	5.4	10
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	2.0	6.1	9.7
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	2.7	6.1	13
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	5.7 J	37	42 J
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected

E = Exceeds instrument calibration range.

J = Estimated value due to bias in the CCV.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	117	70-130
4-Bromofluorobenzene	96	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-6

Lab ID#: 0603056-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	8030908	Date of Collection:	3/1/06
Dil. Factor:	2.42	Date of Analysis:	3/9/06 03:35 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	4.8	Not Detected	10	Not Detected
Vinyl Chloride	1.2	2.1	3.1	5.3
1,3-Butadiene	1.2	51	2.7	110
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.8	10	9.1	19
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	4.8	250	11	590
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	6.4	3.8	20
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.2	2.6	4.4	9.2
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	12	4.3	44
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	6.9	3.6	20
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Cyclohexane	1.2	2.5	4.2	8.6
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	750 E	5.6	3500 E
Benzene	1.2	7.2	3.9	23
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	5.9	5.0	24
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	14	4.6	55
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-6

Lab ID#: 0603056-03A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030908	Date of Collection:	3/1/06
Dil. Factor:	2.42	Date of Analysis:	3/9/06 03:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
2-Hexanone	4.8	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	2.1	5.2	9.3
m,p-Xylene	1.2	5.9	5.2	26
o-Xylene	1.2	2.1	5.2	9.2
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.9	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	2.0	5.9	9.6
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected U J	36	Not Detected U J
Hexachlorobutadiene	4.8	Not Detected	52	Not Detected

E = Exceeds instrument calibration range.

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	118	70-130
4-Bromofluorobenzene	95	70-130





# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-7

Lab ID#: 0603056-04A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030910	Date of Collection:	3/1/06
Dil. Factor:	6.05	Date of Analysis:	3/9/06 04:55 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rot. Limit (uG/m3)	Amount (uG/m3)
Freon 12	3.0	Not Detected	15	Not Detected
Freon 114	3.0	Not Detected	21	Not Detected
Chloromethane	12	27	25	56
Vinyl Chloride	3.0	Not Detected	7.7	Not Detected
1,3-Butadiene	3.0	36	6.7	80
Bromomethane	3.0	Not Detected	12	Not Detected
Chloroethane	3.0	Not Detected	8.0	Not Detected
Freon 11	3.0	Not Detected	17	Not Detected
Ethanol	12	13	23	24
Freon 113	3.0	Not Detected	23	Not Detected
1,1-Dichloroethene	3.0	Not Detected	12	Not Detected
Acetone	12	200	29	480
2-Propanol	12	Not Detected	30	Not Detected
Carbon Disulfide	3.0	Not Detected	9.4	Not Detected
3-Chloropropene	12	Not Detected	38	Not Detected
Methylene Chloride	3.0	Not Detected	10	Not Detected
Methyl tert-butyl ether	3.0	5.0	11	18
trans-1,2-Dichloroethene	3.0	Not Detected	12	Not Detected
Hexane	3.0	8.1	11	28
1,1-Dichloroethane	3.0	Not Detected	12	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.0	5.7	8.9	17
cis-1,2-Dichloroethene	3.0	Not Detected	12	Not Detected
Tetrahydrofuran	3.0	Not Detected	8.9	Not Detected
Chloroform	3.0	Not Detected	15	Not Detected
1,1,1-Trichloroethane	3.0	Not Detected	16	Not Detected
Cyclohexane	3.0	Not Detected	10	Not Detected
Carbon Tetrachloride	3.0	Not Detected	19	Not Detected
2,2,4-Trimethylpentane	3.0	580	14	2700
Benzene	3.0	9.4	9.7	30
1,2-Dichloroethane	3.0	Not Detected	12	Not Detected
Heptane	3.0	6.1	12	25
Trichloroethene	3.0	Not Detected	16	Not Detected
1,2-Dichloropropane	3.0	Not Detected	14	Not Detected
1,4-Dioxane	12	Not Detected	44	Not Detected
Bromodichloromethane	3.0	Not Detected	20	Not Detected
cis-1,3-Dichloropropene	3.0	Not Detected	14	Not Detected
4-Methyl-2-pentanone	3.0	Not Detected	12	Not Detected
Toluene	3.0	15	11	55
trans-1,3-Dichloropropene	3.0	Not Detected	14	Not Detected
1,1,2-Trichloroethane	3.0	Not Detected	16	Not Detected



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-7

Lab ID#: 0603056-04A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	8030910	Date of Collection	3/1/06
Dil. Factor	6.05	Date of Analysis	3/9/06 04:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	3.0	Not Detected	20	Not Detected
2-Hexanone	12	Not Detected	50	Not Detected
Dibromochloromethane	3.0	Not Detected	26	Not Detected
1,2-Dibromoethane (EDB)	3.0	Not Detected	23	Not Detected
Chlorobenzene	3.0	Not Detected	14	Not Detected
Ethyl Benzene	3.0	Not Detected	13	Not Detected
m,p-Xylene	3.0	4.1	13	18
o-Xylene	3.0	Not Detected	13	Not Detected
Styrene	3.0	Not Detected	13	Not Detected
Bromoform	3.0	Not Detected	31	Not Detected
Cumene	3.0	Not Detected	15	Not Detected
1,1,2,2-Tetrachloroethane	3.0	Not Detected	21	Not Detected
Propylbenzene	3.0	Not Detected	15	Not Detected
4-Ethyltoluene	3.0	Not Detected	15	Not Detected
1,3,5-Trimethylbenzene	3.0	Not Detected	15	Not Detected
1,2,4-Trimethylbenzene	3.0	Not Detected	15	Not Detected
1,3-Dichlorobenzene	3.0	Not Detected	18	Not Detected
1,4-Dichlorobenzene	3.0	Not Detected	18	Not Detected
alpha-Chlorotoluene	3.0	Not Detected	16	Not Detected
1,2-Dichlorobenzene	3.0	Not Detected	18	Not Detected
1,2,4-Trichlorobenzene	12	Not Detected U J	90	Not Detected U J
Hexachlorobutadiene	12	Not Detected	130	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	95	70-130



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-1

Lab ID#: 0603056-05A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030916	Date of Collection:	3/1/06
Dil. Factor:	2.42	Date of Analysis:	3/9/06 09:38 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rot. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	4.8	Not Detected	10	Not Detected
Vinyl Chloride	1.2	1.5	3.1	4.0
1,3-Butadiene	1.2	56	2.7	120
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.8	39	9.1	74
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	4.8	480	11	1100
2-Propanol	4.8	5.3	12	13
Carbon Disulfide	1.2	3.3	3.8	10
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.2	4.9	4.4	18
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	23	4.3	81
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	39	3.6	120
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	1.4	6.6	7.4
Cyclohexane	1.2	2.9	4.2	10
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	510 E	5.6	2400 E
Benzene	1.2	10	3.9	34
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	6.5	5.0	26
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	19	4.6	72
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-1

Lab ID#: 0603056-05A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030916	Date of Collection:	3/1/06
Dil. Factor:	2.42	Date of Analysis:	3/9/06 09:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
2-Hexanone	4.8	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	2.9	5.2	13
m,p-Xylene	1.2	8.8	5.2	38
o-Xylene	1.2	3.1	5.2	14
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	1.9	5.9	9.4
1,3,5-Trimethylbenzene	1.2	1.2	5.9	6.0
1,2,4-Trimethylbenzene	1.2	3.5	5.9	17
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected U J	36	Not Detected U J
Hexachlorobutadiene	4.8	Not Detected	52	Not Detected

E = Exceeds instrument calibration range.

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	101	70-130



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-1 Duplicate

Lab ID#: 0603056-05AA

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030917	Date of Collection:	3/1/06
Dil. Factor:	2.42	Date of Analysis:	3/9/06 10:21 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rot. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	4.8	Not Detected	10	Not Detected
Vinyl Chloride	1.2	1.4	3.1	3.6
1,3-Butadiene	1.2	53	2.7	120
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.8	39	9.1	73
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	4.8	450	11	1100
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	3.2	3.8	10
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.2	4.1	4.4	15
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	20	4.3	70
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	39	3.6	110
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	1.2	6.6	6.8
Cyclohexane	1.2	3.0	4.2	10
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	490 E	5.6	2300 E
Benzene	1.2	11	3.9	34
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	6.2	5.0	25
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	19	4.6	71
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-1 Duplicate

Lab ID#: 0603056-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030917	Date of Collection:	3/1/06
Dil. Factor:	2.42	Date of Analysis:	3/9/06 10:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
2-Hexanone	4.8	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	3.0	5.2	13
m,p-Xylene	1.2	9.3	5.2	40
o-Xylene	1.2	2.9	5.2	12
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	1.9	5.9	9.2
1,3,5-Trimethylbenzene	1.2	1.3	5.9	6.2
1,2,4-Trimethylbenzene	1.2	3.1	5.9	15
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected U J	36	Not Detected U J
Hexachlorobutadiene	4.8	Not Detected	52	Not Detected

E = Exceeds instrument calibration range.

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	89	70-130



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-3

Lab ID#: 0603056-06A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030913	Date of Collection:	3/1/06
Dil. Factor:	4.84	Date of Analysis:	3/9/06 07:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2.4	Not Detected	12	Not Detected
Freon 114	2.4	Not Detected	17	Not Detected
Chloromethane	9.7	Not Detected	20	Not Detected
Vinyl Chloride	2.4	Not Detected	6.2	Not Detected
1,3-Butadiene	2.4	9.2	5.4	20
Bromomethane	2.4	Not Detected	9.4	Not Detected
Chloroethane	2.4	Not Detected	6.4	Not Detected
Freon 11	2.4	Not Detected	14	Not Detected
Ethanol	9.7	30	18	57
Freon 113	2.4	Not Detected	18	Not Detected
1,1-Dichloroethene	2.4	Not Detected	9.6	Not Detected
Acetone	9.7	360	23	850
2-Propanol	9.7	Not Detected	24	Not Detected
Carbon Disulfide	2.4	8.3	7.5	26
3-Chloropropene	9.7	Not Detected	30	Not Detected
Methylene Chloride	2.4	Not Detected	8.4	Not Detected
Methyl tert-butyl ether	2.4	Not Detected	8.7	Not Detected
trans-1,2-Dichloroethene	2.4	Not Detected	9.6	Not Detected
Hexane	2.4	3.3	8.5	12
1,1-Dichloroethane	2.4	Not Detected	9.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.4	15	7.1	44
cis-1,2-Dichloroethene	2.4	Not Detected	9.6	Not Detected
Tetrahydrofuran	2.4	Not Detected	7.1	Not Detected
Chloroform	2.4	Not Detected	12	Not Detected
1,1,1-Trichloroethane	2.4	Not Detected	13	Not Detected
Cyclohexane	2.4	Not Detected	8.3	Not Detected
Carbon Tetrachloride	2.4	Not Detected	15	Not Detected
2,2,4-Trimethylpentane	2.4	720	11	3400
Benzene	2.4	4.9	7.7	16
1,2-Dichloroethane	2.4	Not Detected	9.8	Not Detected
Heptane	2.4	5.8	9.9	24
Trichloroethene	2.4	Not Detected	13	Not Detected
1,2-Dichloropropane	2.4	Not Detected	11	Not Detected
1,4-Dioxane	9.7	Not Detected	35	Not Detected
Bromodichloromethane	2.4	Not Detected	16	Not Detected
cis-1,3-Dichloropropene	2.4	Not Detected	11	Not Detected
4-Methyl-2-pentanone	2.4	Not Detected	9.9	Not Detected
Toluene	2.4	13	9.1	49
trans-1,3-Dichloropropene	2.4	Not Detected	11	Not Detected
1,1,2-Trichloroethane	2.4	Not Detected	13	Not Detected



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-3

Lab ID#: 0603056-06A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030913	Date of Collection:	3/1/06
Dil. Factor:	4.84	Date of Analysis:	3/9/06 07:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	2.4	Not Detected	16	Not Detected
2-Hexanone	9.7	Not Detected	40	Not Detected
Dibromochloromethane	2.4	Not Detected	21	Not Detected
1,2-Dibromoethane (EDB)	2.4	Not Detected	18	Not Detected
Chlorobenzene	2.4	Not Detected	11	Not Detected
Ethyl Benzene	2.4	2.6	10	11
m,p-Xylene	2.4	8.0	10	35
o-Xylene	2.4	2.6	10	11
Styrene	2.4	Not Detected	10	Not Detected
Bromoform	2.4	Not Detected	25	Not Detected
Cumene	2.4	Not Detected	12	Not Detected
1,1,2,2-Tetrachloroethane	2.4	Not Detected	17	Not Detected
Propylbenzene	2.4	Not Detected	12	Not Detected
4-Ethyltoluene	2.4	Not Detected	12	Not Detected
1,3,5-Trimethylbenzene	2.4	Not Detected	12	Not Detected
1,2,4-Trimethylbenzene	2.4	2.8	12	14
1,3-Dichlorobenzene	2.4	Not Detected	14	Not Detected
1,4-Dichlorobenzene	2.4	Not Detected	14	Not Detected
alpha-Chlorotoluene	2.4	Not Detected	12	Not Detected
1,2-Dichlorobenzene	2.4	Not Detected	14	Not Detected
1,2,4-Trichlorobenzene	9.7	Not Detected U J	72	Not Detected U J
Hexachlorobutadiene	9.7	Not Detected	100	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	94	70-130





# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-2

Lab ID#: 0603056-07A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030909	Date of Collection:	3/1/06
Dil Factor:	2.38	Date of Analysis:	3/9/06 04:18 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Freon 114	1.2	Not Detected	8.3	Not Detected
Chloromethane	4.8	Not Detected	9.8	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	2.0	2.6	4.5
Bromomethane	1.2	Not Detected	4.6	Not Detected
Chloroethane	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	Not Detected	6.7	Not Detected
Ethanol	4.8	11	9.0	20
Freon 113	1.2	Not Detected	9.1	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Acetone	4.8	96	11	230
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	1.4	3.7	4.3
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.1	Not Detected
Methyl tert-butyl ether	1.2	1.5	4.3	5.4
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	4.8	3.5	14
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	8.0	6.5	44
Cyclohexane	1.2	Not Detected	4.1	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.5	Not Detected
2,2,4-Trimethylpentane	1.2	200	5.6	950
Benzene	1.2	1.8	3.8	5.9
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	2.3	4.9	9.3
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.0	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
Toluene	1.2	8.4	4.5	31
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-06-2

Lab ID#: 0603056-07A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030909	Date of Collection:	3/1/06
Dil. Factor:	2.38	Date of Analysis:	3/9/06 04:18 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.2	Not Detected	8.1	Not Detected
2-Hexanone	4.8	Not Detected	19	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.1	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	Not Detected
Ethyl Benzene	1.2	1.9	5.2	8.1
m,p-Xylene	1.2	5.6	5.2	24
o-Xylene	1.2	2.0	5.2	8.6
Styrene	1.2	Not Detected	5.1	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.2	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	1.2	5.8	6.1
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	2.2	5.8	11
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected U J	35	Not Detected U J
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	93	70-130



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0603056-08A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030906	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/9/06 02:03 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0603056-08A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030906	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/9/06 02:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected U J	15	Not Detected U J
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	89	70-130



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0603056-09A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/9/06 11:36 AM

Compound	%Recovery
Freon 12	100
Freon 114	101
Chloromethane	102
Vinyl Chloride	98
1,3-Butadiene	91
Bromomethane	98
Chloroethane	86
Freon 11	102
Ethanol	95
Freon 113	97
1,1-Dichloroethene	95
Acetone	95
2-Propanol	99
Carbon Disulfide	97
3-Chloropropene	101
Methylene Chloride	97
Methyl tert-butyl ether	98
trans-1,2-Dichloroethene	94
Hexane	99
1,1-Dichloroethane	99
2-Butanone (Methyl Ethyl Ketone)	95
cis-1,2-Dichloroethene	94
Tetrahydrofuran	85
Chloroform	100
1,1,1-Trichloroethane	102
Cyclohexane	96
Carbon Tetrachloride	108
2,2,4-Trimethylpentane	98
Benzene	85
1,2-Dichloroethane	99
Heptane	94
Trichloroethene	94
1,2-Dichloropropane	90
1,4-Dioxane	97
Bromodichloromethane	102
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	99
Toluene	99
trans-1,3-Dichloropropene	106
1,1,2-Trichloroethane	90



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0603056-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/9/06 11:36 AM

Compound	%Recovery
Tetrachloroethene	95
2-Hexanone	100
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	100
Chlorobenzene	95
Ethyl Benzene	96
m,p-Xylene	98
o-Xylene	97
Styrene	99
Bromoform	108
Cumene	94
1,1,2,2-Tetrachloroethane	97
Propylbenzene	100
4-Ethyltoluene	96
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	99
1,3-Dichlorobenzene	89
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	97
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	68 Q
Hexachlorobutadiene	98

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	100	70-130



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0603056-10A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030903	Date of Collection:	NA
Dil Factor:	1.00	Date of Analysis:	3/9/06 12:05 PM

Compound	%Recovery
Freon 12	101
Freon 114	108
Chloromethane	107
Vinyl Chloride	100
1,3-Butadiene	104
Bromomethane	105
Chloroethane	90
Freon 11	108
Ethanol	102
Freon 113	102
1,1-Dichloroethene	100
Acetone	104
2-Propanol	106
Carbon Disulfide	108
3-Chloropropene	105
Methylene Chloride	100
Methyl tert-butyl ether	102
trans-1,2-Dichloroethene	93
Hexane	102
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	98
Tetrahydrofuran	87
Chloroform	103
1,1,1-Trichloroethane	107
Cyclohexane	99
Carbon Tetrachloride	113
2,2,4-Trimethylpentane	98
Benzene	83
1,2-Dichloroethane	100
Heptane	95
Trichloroethene	94
1,2-Dichloropropane	93
1,4-Dioxane	96
Bromodichloromethane	95
cis-1,3-Dichloropropene	93
4-Methyl-2-pentanone	98
Toluene	100
trans-1,3-Dichloropropene	88
1,1,2-Trichloroethane	88



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0603056-10A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	8030903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/9/06 12:05 PM

Compound	%Recovery
Tetrachloroethene	96
2-Hexanone	94
Dibromochloromethane	93
1,2-Dibromoethane (EDB)	98
Chlorobenzene	98
Ethyl Benzene	97
m,p-Xylene	96
o-Xylene	91
Styrene	91
Bromoform	78
Cumene	92
1,1,2,2-Tetrachloroethane	96
Propylbenzene	98
4-Ethyltoluene	95
1,3,5-Trimethylbenzene	102
1,2,4-Trimethylbenzene	78
1,3-Dichlorobenzene	90
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	96
1,2-Dichlorobenzene	89
1,2,4-Trichlorobenzene	83
Hexachlorobutadiene	91

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	99	70-130





AN ENVIRONMENTAL ANALYTICAL LABORATORY

### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, state, federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

### CHAIN-OF-CUSTODY RECORD

Page \_\_\_\_ of \_\_\_\_

Contact Person Nicholas Clerett  
Company RMT Inc Email jennifer.meranda@rmtinc.com  
Address 2025 E. Belline Ave City Grand Rapids State MI Zip 49546  
Phone 616-975-5415 Fax 616-975-1098  
Collected by: (Signature) [Signature]

Project Info:		Turn Around Time:	Lab Use Only:
P.O. # <u>6527.21</u>		<input checked="" type="checkbox"/> Normal	Pressurized by: <u>[Signature]</u>
Project # <u>6527.21</u>		<input type="checkbox"/> Rush	Date: <u>02/08/06</u>
Project Name <u>L.E.C.</u>		specify	Pressurization Gas: <u>N<sub>2</sub></u>

Lab ID	Field Sample ID: (Location)	Can#	Date	Time	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final
01A	SG-06-4		3/1/06	1008	TD-15	-26	-5	5.0%	15.0%
02A	SG-06-5		3/1/06	1105	TD-15	-27	-5	5.5%	
03A	SG-06-6		3/1/06	1129	TD-15	-26.5	-5	5.0%	
04A	SG-06-7		3/1/06	1151	TD-15	-26.5	-5	5.0%	
05A	SG-06-1		3/1/06	1313	TD-15	-27	-5	5.0%	
06A	SG-06-3		3/1/06	1342	TD-15	-27.5	-5	5.0%	
07A	SG-06-2		3/1/06	1452	TD-15	-26.5	-5	4.5%	

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>3/1/06 11650</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>Fed Ex</u>	Notes:
Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>03/02/06 1025</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>03/02/06 1025</u>	
Relinquished by: (signature) <u>[Signature]</u> Date/Time <u></u>	Received by: (signature) <u>[Signature]</u> Date/Time <u></u>	

Lab Use Only	Shipper Name <u>Fed Ex</u>	Air Bill # <u>95341051 7230</u>	Temp (°C) <u>-</u>	Condition <u>Good</u>	Customer Seals Intact? <u>Yes No None</u>	Work Order # <u>0603056</u>
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# Appendix E

## Report Certification

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**REPORT CERTIFICATION**  
**PURSUANT TO N.J.A.C. 7:26E-1.5**

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement, which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Mr. Cristopher R. Anderson

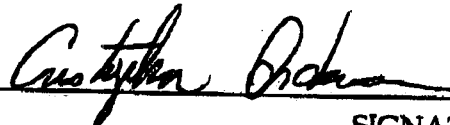
PRINTED NAME

Manager, Environmental Services

TITLE

L.E. Carpenter & Company

COMPANY



SIGNATURE

5/05/06

DATE